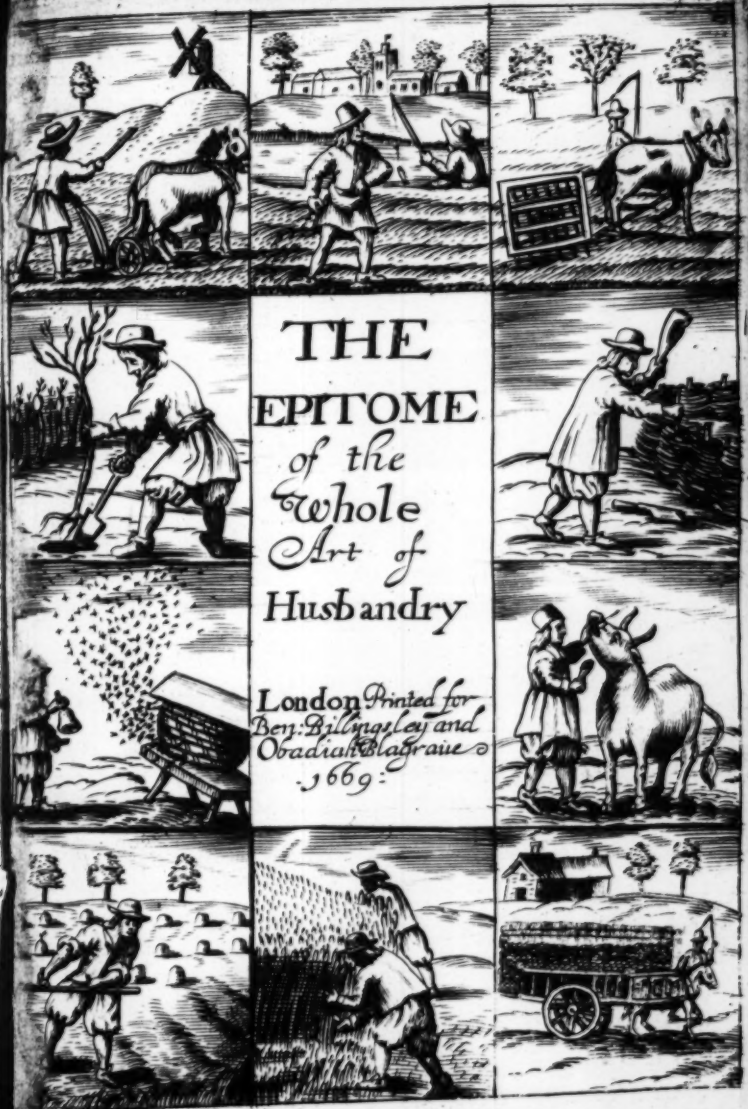

THE EPITOME of the Whole Art of Husbandry

London Printed for Ben: Billingsley and Obadiah Blagraue 1669.

Thomas fecit

THE EPITOME OF THE Art of Husbandry.

Compriſing all neceſſary Directions for the Improvement of it. *Viz.*

Plowing, Sowing, Grafting, Gardning, Ordering of Flowers, Herbs; Directions for the Uſe of the Angle; Ordering of Bees: Together with the Gentlemans Heroick Exerciſe, diſcourſing of Horſes, their Nature, and Uſe, with their Diſeaſes and Remedies: Of Oxen, Cows, Calves, Sheep, Hogs, with the manner of ordering them, their Diſeaſes and Remedies.

Of the Nature of Marle, the beſt way of Planting Clover-graſs, Hops, Saffron, Liquoriſh, Hemp, &c.

To which is annexed by way of Appendix, a new Method of Planting Fruit-Trees, and Improving of an Orchard.

By *J. B.* Gent.

London, Printed for *Ben. Billingſley* and *Obadiah Blagrave* at the Entrance into *Greſham* Colledge over againſt the Church in *Broad-ſtreet*, at the Sign of the *Printing-preſs*, formerly in *Cornhil*. 1669.

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To my ever Honoured Uncle *George Miller* Esq; of *Swallowfield*, in the County of *Wilts*.

Sir,

THe *Author of this Treatiſe unwilling to affix his name, gave me the liberty to dedicate the ſame to whom I would: So I knew none that I was more obliged unto then your ſelf, or did better underſtand this Treatiſe, in regard you are Landlord, and an Improver of Lands, and ſo capable of putting in Practice ſome new Diſcoveries offered to the Publick. If you have any Leiſure to peruſe the ſame, I hope you may with your Pen leave ſuch a Platform for your hopeful Heir, your great Grandchild, Sir* Henry Winchcomb *my Kinſman*;

That if God ſhall bleſs him with health, he may follow your Directions as may moſt improve his Eſtate; that when God ſhall be pleaſed to take you out of this withering Durance, he may ſurvive you, and be the main Prop and Luſtre in your Family, which ſhall ever be the Prayer of,

Sir,

Your dutiful Nephew, and humble Servant,

O. B.

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THE

THE EPITOME OF THE Art of Husbandry:

With the ancient Terms thereof, as they have been uſed in ſeveral Counties of *England*: Together with the Chiefeſt, Choiceſt, and moſt Experimental Obſervations; as well of former, as alſo our Modern more Refined Writers in Ruſtical Affairs.

Of the diverſe manner of Ploughs.

THere are ſeveral makings of Ploughs, according to the diverſe manner of Countries; there are Ploughs of Iron of diverſe faſhions, which is occaſioned

from the diverſity of Grounds and Soyls: Some are white Clay, ſome red, ſome gravel chilturn, ſome ſand, ſome barren Earth, ſome marled, and in many places Heath-ground; ſo that one ſort of Plough will not ſerve in all places, therefore it is neceſſary to have diverſe manner of Ploughs. In *Sommerſet-ſhire* about *Ciceſter*, the Sharre-beam that in many places is called the Plough-head, is 4 or 5 foot long, and it is broad and thin. And that is becauſe the Land is very tough, ſo as to ſoak the Plough into the Earth, if the Sharre-beam were not large, broad, and thin. In *Kent* they have other manner of Ploughs; ſome go with wheels, as they do in diverſe other manner of places, and ſome will turn the Shell-bred at every Lands end, and plough all one way. In *Buckingham-ſhire* are Ploughs made of another manner, and alſo other manner of Plough-Irons, the which generally are good and likely to ſerve in many places, and eſpecially if the Plough-beam and Sharre-beam were four inches longer between the Sheath and Plough-tayl, that the Shell-bred might come more ſlope; for thoſe Ploughs give out too ſuddenly, and therefore they are the worſe to draw. In *Leiceſter-ſhire*, *Lanca-ſhire*, *York-ſhire*, *Cambridge-ſhire*, *Lincoln-ſhire*, *Norfolk*, and many other Countries, the Ploughs are of divers makings. But howſoever they are made, they are well tempered, and go well. *To*

To know the Names of all parts of the Plough.

To inform those young Husbandmen that are ignorant of the several names of ploughs, I shall express them as followeth: The Plough-beam is the longer Tree, above which is a little bend. The Share-beam is the Tree underneath; whereupon the Share is set. The plough-sheth is a thin piece of dry wood made of Oak, that is set fast in a Mortes to the ploughs beam, and also into the Share-beam, the which is the Kere or chief band of the plough. The plough-tayl is that the Husbandman holdeth in his hand, and in the hinder end of the plough-beam is put a long slit made in the same tayl, and not set fast, but that it may rise up and go down, and it is pinned behind, and the same plough-tayl is set fast in a Mortes in the hinder end of the Share-beam. The plough-stilt is on the right side of the plough, whereupon the Rest is set: the Rest is a little piece of wood pinned fast upon the nether end of the stilt, and to the Share-beam into the further end. The Shelbred is a broad piece of wood fast pinned to the right side of the Sheth in the farther end, and to the utter side of the stilt in the hinder end: And the said Shelbred should come over the said Sheth

and Senbred an inch, aud to go paſt the midſt of the Share with a ſharp edge to receive and turn the Earth when the Culter hath cut it. There are two long ſtands in every plough in the hinder end, ſet a ſlope between the plough-tayl and the ſtilt, to hold out and keep the plough abroad in the hinder end, the one is longer then the other. The plough-foot is a little piece of wood which is crooked and ſet before in a Mortes in the plough-beam, ſet faſt with Wedges to drive up and down, and it is a ſtay to order of what deepneſs the plough ſhall go The plough-ear is made of three pieces of Iron, nailed faſt to the right ſide of the plough-beam. The meaner ſort have a crooked ſort of wood pinned faſt to the plough-beam. The Share is a piece of Iron, ſharp before, and broad behind, a foot long, made with a Socket to be ſet on the further end of the Share-beam, the Culter is a bent piece of Iron ſet in a Mortes in the midſt of the plough-beam faſtned with Wedges on every ſide, and the back thereof is half an inch thick, and more then three inches broad, made ſharp before to cut the Earth clean, it muſt be well ſteeled, which will cauſe the eaſier draught, and the Irons for to laſt the longer. The plough-wall is a piece of hard wood, with a pin put through, ſet in the plough-beam in an Augure hole.

Of

Of the tempering of the Ploughs.

THe knowledge of the tempering of the Plough is very expedient and neceſſary for a Husbandman, that he may plough and turn clean, and make no Reſt-balks. A Reſt-balk is where the Plough biteth at the point of the Culter or Share, and cutteth not the ground clean to the Furrow that was lately ploughed, but leaveth a little Ridge ſtanding between, the which breeds Thiſtles and other Weeds. All theſe Ploughs ſhould have all a like manner of tempering in the Irons: Howſoever one may temper for one thing in two or three places, as for deepneſs; the foot is one, the ſetting of the Culter is another, and the third is at the Plough-tayl, where are two Wedges that are called Slote-wedges; the one is in the Slote above the Beam, and the other is in the ſaid Slote under the Plough-beam; ſometimes the Husbandman will ſet both above, or both underneath; but always let him take good heed, and keep one general Rule, That the hinder end of the Share-beam always touch the Earth, that it may kill the Worms, or elſe it goeth not truly. The tempering to go broad or narrow, is in the ſetting of the Culter, and with the driving of the ſame Wedges, fore-wedge and hind-wedge, which ſhould be

made of dry wood, & alſo the ſetting on of his ſhare helpeth well, and is a cunning point of Husbandry, which mendeth and pareth much ploughing; it muſt lean much into the Furrow, and the point muſt not ſtand too much up nor down, nor too much into the Land, nor into the Furrow. Some Ploughs have a Band of Iron triangle-wiſe, ſet there as the Plough-ear ſhould be, that hath three nickes on the further ſide: and if the Husbandman will have his Plough to go a narrow Furrow, as a ſide Furrow ſhould be, then he muſt ſet his Foot-team in the nick next to the Plough-beam; and he will go an ordinary breadth, he ſetteth it in the middle nick that is beſt for ſtirring, and if he would go a broad Furrow he ſetteth it in the uttermoſt nick, that is the beſt for following, the which is a good way to keep the Brede ſound tempered, but it ſerveth not the deepneſs: and ſome men have inſtead of the Plough-foot a piece of Iron ſet upright in the further end of the Plough-beam, they call it a Cock, made with two or three nicks, and and that ſerveth for deepneſs. The Ploughs that go with Wheels have all a ſtraight Beam, and may be tempered in the Iron, as the other are for the breadth; but their moſt ſpecial temper is at the Bolſter, where the Plough-beam lyeth, and that ſerveth for deepneſs and for breadth. They are good on even Ground

that

that lyeth light, but they are far more coſtly then the other Ploughs. And though theſe Ploughs be well tempered for one manner of Ground, that temper will not ſerve for another manner of Ground, but it muſt reſt in the diſcretion of the Husbandman to know when it goeth well.

Neceſſary things that belong to a Plough, Cart, or Wain.

BEfore the Husbandman begins to plough, he muſt have his Plough well ordered, and his Plough-Iron, his Oxen, or Horſes, and all the Gere that belongeth to them, that is to ſay, Bows, Yokes, Lades, Stickings, Wrethyne Teams. And before he doth lade his Corn, he muſt have a Wain, a Capiock, or pair of Sleths, Wain rope, a Pitchfork. This Wain is made of divers pieces, that will require great reparation, that is to ſay, the Wheels, which are made of Nathes, Spokes, Treſſes, and Dowles, they muſt be well fettered with wood or Iron, and if they are Iron-bound, they are much the better; although they are the dearer at the firſt, yet at length the Husbandman ſhall find them better cheap; for a pair of Wheels Iron-bound will wear out ſeven or eight pair of Wheels, and go round and light after the Oxen or Horſes to draw. Howſoever on Moor-

iſh Grounds and ſoft, the other Wheels are better, becauſe they are broader on the ſole, and will not go ſo deep. They muſt have an Axletree clout with eight Wain clouts of Iron, two Limpins of Iron in the Axletree end, two Axle pins of Iron, or elſe of tough hard wood. The body of the Wain of Oak, the Staves, the nether Rathes, the over Rathes, Croſs-ſomner, the Keys and Py-ſtaves. And if he go with a Horſe or a Mare to plough, then muſt he have his Hombers, or Collers, Holmes, whited Traiſes, Swingleters, and Tog. Alſo a Cart made of Aſh, becauſe it is light and like ſtuff to the Wain, and alſo a Cart-Saddle, Back-bands and Belly-bands, and a Cart-ladder behind when the Husbandman ſhall carry any Corn, or other Proviſion. In many Countries there are Wains that have Cart-ladders both behind and before. Alſo the Husbandman muſt have an Ax, a Hatchet, a Hedging-bill, a Pin-auger, a Reſt-auger, a Hail, Spade, and a ſhovel: many other things are belonging to Husbandmen which will be very coſtly, therefore it will be neceſſary for him to make his Yokes, Ox-bows, Stoles, and as many other things as he can of his Plough-gere.

Whether

Whether is better a Plough of Horſes, or a Plough of Oxen.

IN ſome places a Horſe-plough is better then an Ox-plough, that is to ſay, in every place where the Husbandman hath ſeveral paſtures; for the Horſes may be teddered or tyed upon their Leys, Balks, or Hades, whereas Oxen may not be kept, and it is but in few places that they are uſed to be teddered. And Horſes will go faſter then Oxen on even or light Ground, and quicker in Carriages, but they are far more coſtly to keep in Winter; for they muſt have both Hay and Corn to eat, and Straw for Litter: they muſt be well ſhod on all four feet, and the Gear that they draw with is more coſtly then that of Oxen, and will laſt but for a ſhort time. The Oxen will eat ſtraw and a little Hay, the which is not half the coſt that is required for Horſes, neither are they ſhod. Therefore where the Husbandman hath ſeveral paſtures to put his Oxen in when they come from their work, there the Ox-plough is the better. For an Ox muſt not endure his work to labour all day, and then to be put to the Commons, or elſe before the Herdmen, all night without meat, and to go to his labour in the morning: But if he be put in good paſture all night, he will labour luſtily

luſtily all the day. Moreover Oxen will plough in tough Clay and hilly Ground where Horſes will ſtand ſtill. If any Diſeaſe come to the Horſe, or the Horſe grows old, bruiſed or blind, then he will be little worth; and if any Diſeaſe come to an Ox, that he grows old, bruiſed, or blind, for a ſmall matter he may be fatted, and then he is mans meat, and as good or better then ever he was; whereas when the Horſe dyes, he is but Carrion.

Of Horſes and Mares to draw.

A Husbandman cannot be without Horſes or Mares, or both, and that more eſpecially if he go with a Horſe-plough, he muſt have both his Horſes to draw, and his Mares to bring Colts to uphold his ſtock; the Mares muſt not bear Sacks, or be ridden upon, or go Journeys when they are with Fole, and eſpecially when they have gone with Fole twenty or twenty three weeks, for then then there is great danger; for if ſhe be then ridden upon and ſet up hot, ſhe will caſt her Fole, which will prove a great loſs to him that owns her; For ſhe will labour and bear when ſhe hath foaled, and draw when ſhe is with Foal as well as the Horſe. It is convenient for the Husbandman to know when his Mare ſhould be horſed. It is the common ſaying, that ſhe will

will take Horſe within nine or ten days next after ſhe hath foaled, but I am not altogether of that opinion; and if ſhe ſo do, ſhe will not hold thereto, for that Horſe doth force and drive her to it: but twenty days after is time enough to bring her to a Horſe, for otherwiſe ſhe will not hold to it, except ſhe be very eager of horſing: and that may be known by her ſhap, for that will twirl about and cloſe again many times in an hour. And then bring her to a Horſe, and let her be with him a day or a night, and that is ſufficient; for it is better to keep the Horſe from the Mares, then to go with them, for divers cauſes, and that more eſpecially for that the Horſe ſhall be more luſty, and more Foals may be got. But that Husbandman that hath many Mares will have too little leiſure to attend them, but let them go together, and happy be lucky. Some men do hold an opinion, that put a Horſe to a Mare in the beginning of the Moon, after it be prime, that he ſhall get a Horſe-foal; others hold the contrary, that if a Horſe be put to a Mare in the old of the Moon, he ſhou'd get Horſe-foals. I hold that it maketh no matter whether, for I have proved it, that a Mare is meſt able to bear the Horſe from *May*-day to St. *Bartholomews* day; for I have had Horſes that have gone into my Mares both day and night, and at the foaling time. I have had upon one day a Horſe-

a Horſe-foal, and on the next day and ſecond a Mare-foal, and on the third and fourth day next after a Horſe-foal, and on the next day or ſecond a Mare-foal, and on the third or fourth day next after a Horſe again, and ſo every week of both ſorts; whereas by their opinion or reaſon, I ſhould have fourteen days together Horſe-foals, and other fourteen days together Mare-foals. But of one thing I am certain, that ſome one Horſe will get more Horſe-foals then ſome other Horſe will do; and likewiſe a Mare will bear more Mare-colts then ſome other Mares will do, though they are horſed both with one Horſe; neither can I give any reaſon why, except the luſtineſs of the Natures of both of them are put to it, whether of them ſhould have the domination. But if the Husbandman have Mares of divers colours, let him ſever them in divers parcels, and let him put to his white Mare a gray Horſe, and his gray Mare a white Horſe, ſo that he be not all white-skinned about the mouth; and to a Mare of colour that hath no white upon her, a coloured Horſe that hath much more white on him, and to his coloured Mare a mean white Horſe of colour main white. And thus ſhall the Colts be well coloured. And if a white Horſe be put to a coloured Mare, ſhe ſhall have moſt commonly ſandy Colt like to an Iron gray, neither like

Sire

Sire nor Dam. Howſoever, I have known many Mares that will have their Colts like the Horſe that got it, the which is againſt the kind of Mares; for a man had rather get one good Horſe then many Mares that are not ſo likely to prove well.

To carry Wood and other Neceſſaries.

IN *May* when the Husbandman hath fallowed the Ground, and ſet out his ſheep-fold, and carried away the Dung and Muck, if he have any Wood, Coal, or Timber to carry, or ſuch other Neceſſaries, that muſt needs be done with the Cart or Wain, then is the time to do it. For then the way is like to be fair and dry, and the days long, and at that time the Husbandman hath leaſt to do in Husbandry.

To carry out Dung or Muck, and ſpread it.

IN the latter end of *April*, and the beginning of *May*, is the time for the Husbandman to carry out his Dung or Muck, and to lay it upon his Barley-ground. And where he hath Barley this year, let him ſow it with Wheat or Rye, and the next time that it is fallowed, he ſhall mow all his Lands over at every ſecond fallow. But that Husbandman that can find the means to carry out his Dung, and doth lay it upon his

his Land after it be once ſtirred, it is much better for him then to lay it upon his fallow, for divers cauſes: One is, that if it be laid upon his fallow, all that falleth upon the hollow ridge ſhall do little good; for when it is ridged again, it lyeth ſo deep in the Earth, that it will not be eaſily ploughed up again, except that when he hath ſpread it, he will with a Shovel or a Spade caſt out all that is fallen in the ridge. And if it be laid upon the ſtirring, at every ploughing it ſhall meddle the Dung and the Earth together; the which ſhall cauſe the Corn to grow and increaſe much the better. In ſome places they load not their Dung till Harveſt be done: this hath been a cuſtom on the furtheſt ſide of *Darbyſhire* called *Scareſdale*, *Halonſhire*, and ſo Northwards towards *York*, and *Rippon*, and that I call better then upon the fallow, and eſpecially for Barley. But upon the firſt ſtirring it is beſt for Wheat or Rye, and that the Husbandmans Dung be laid upon ſmall heaps nigh together, and to ſpread it even, and to leave no Dung there as the Muck-heap ſtood; for the moiſtneſs of the Dung ſhall cauſe the Ground to be rank enough: And if it be meddled with Earth, it will laſt the longer, and better for Barley then for Wheat or Rye, becauſe of Weeds, Horſe-dung is the worſt Dung that is. The Dung of all manner of Cattel that chew their Cud, is very

very good, and the Dung of Doves is beſt, but it muſt be laid upon the Ground very thin.

The firſt Stirring.

IN *June* is the time to rigge up the fallow, the which is cauſed the firſt ſtirring; and then let the Husbandman plough it as deep as he can for to turn the Roots of the Weeds upwards, that the Sun and the dry Weather may kill them; for he cannot conveniently plough his Land, and load out his Dung both upon one day with one draught of beaſts, but he may well enough load out his Dung before Noon, and he may load Hay or Corn in the Afternoon with the ſame draught, with no hurt to his Cattel, becauſe in loading of Hay or Corn the Cattel are always currying on biting, which they cannot do in loading of Dung or ploughing.

The ſecond Stirring.

IN *Auguſt*, or the beginning of *September*, is the time for the Husbandman to make his ſecond ſtirring, and moſt commonly it is caſt down and ploughed a main furrow not too deep and ſo he turns it clean. But if it be caſt, it ſhould be water-furrowed between the Lands there where the Raine uſes to be, that it may be dryer when the Land ſhall be ſown,

and

and if the Lands lye high in the Rigge, and high at the Raine, and low in the midſt of the ſide, that the water may not run eaſily into the Raine, as I have obſerved from time to time in many places, then let the Husbandman ſet his Plough three or four foot from the Rigge, and caſt all the Rigge on both ſides, and when the Rigge is caſt, let him ſet his Plough there as he began up to the remainder of the Land, and ſo will the Land both be caſt and rigged, and all at one ploughing: And this ſhall cauſe the Land to lye round when it is ſown at the next time, and thus ſhall the Corn be ſaved from drowning.

To Harrow all manner of Corn.

WHen the Lands are ploughed, and the Corn ſown, it will be convenient that they ſhould be well harrowed, or elſe Crows, Pigeons, will eat, devour, and bear away the Corns. It is the cuſtom in many Countries to have all an Ox-harrow, the which is made of ſix ſmall pieces of Timber called Harrow-bulls, made either of Aſh or Oak; they are of two yards long, and as much as the ſmall of a mans leg, they have ſhots of wood put thorow them, like Laths, and in every bull are ſix ſharp pieces of Iron called Harrow-tyndes, ſet ſomewhat aſlope forward, and the forma

ſlop

ſlope muſt be bigger then the other, becauſe the fore-beam muſt be faſtned to the ſame with ſhackle or with a Wyth to draw by. This Harrow is good to break the great Clots, and to make much mould, and then the Horſe-harrows to come after to make the Clots ſmaller, and to lay the Ground even. It is a great labour and pains for the Ox to go to harrow, it is more eaſie and better for them to go to plough two days, then to harrow one day. It is an old ſaying:

The Ox is never wo,
Till he to the Harrow go.

And the reaſon is, becauſe the Harrow goeth by twitches, and not always after one draught. The Horſe-harrow is made of five bulls, not above an Ell of length, and not ſo much ſhotted & tinded. And when that the Corn is well covered, then it is harrowed enough: There are Horſe-harrows that have tindes of wood, and thoſe are uſed much about *Rippon*, and ſome other places where he may border ſtones; for thoſe ſtones would wear the Iron too ſoon. And thoſe tindes are moſt commonly of the Ground-end of a young Aſh; they are more then a foot long in the beginning, and ſtand as much above the Harrow as beneath. And as they wear or break, they drive them down lower; they ſhould be made long be-

fore that they are uſed, that they may be dry; for then they will indure and laſt much better, and ſtick the faſter. The Horſes that ſhall draw theſe Harrows, muſt be well kept, and ſhod well, or elſe they will be ſoon tired, and ſore beaten, that they will not be able to draw; they muſt have Hombers or Collers, Holmes writhed about their Necks, Treſſes to draw by, and a Swingle-tree for to hold the Treſſes, and a Togewith betwixt the Swingle-tree and the Harrow. And if the Barley-ground will not break with Harrows, but be clotty, it ſhould be beaten with Mauls, and not ſtraight down; for then the Corn will be beaten into the Earth. And if they beat the Clot on the ſide, it will the better break, and the Clot will be the lighter, that the Corn may come by the lighter. Some uſe to roll their Barley-ground after a ſhowre of Rain, to make the Ground to be the evener to mow.

To Fallow.

WHen the Husbandmen have ſown their Peaſe, Beans, Barley, and Oats, and harrowed them, it will be their beſt time to fallow in the latter end of *March* or *April*, for Wheat, Rye, and Barley, and let them do the beſt that they can to plough a broad Furrow, and deep, ſo that they turn it clean, and lay it flat,

flat, that it rear not an edge, the which will deſtroy all the Thiſtles and Weeds: For the deeper and the broader that it goeth, the more new mould, and the greater clots ſhall they have, and the greater clots, the better Wheat; for the clots keep the Wheat warm all the Winter, but at *March* they will melt and break, and fall into many ſmall pieces, the which is a new dunging and refreſhing the Corn, and likewiſe there ſhall be but few weeds grow upon the fallows that are fallowed, for the Plough goeth underneath the roots of all manner of weeds, and turneth the root upwards, that they may not grow. And if the Land be fallowed in Winter time, it will be far the worſe, for theſe three cauſes: One is, all the Rain that falleth, ſhall waſt the Land, and drive away the Dung, and the good Mould, that the Land ſhall be much the worſe. Another cauſe is, the rain ſhall beat the Land ſo flat, and bake it ſo hard together, that a dry *May* coming, it will be too hard to ſtir in the month of *June*. The third cauſe is, the weeds ſhall take ſuch root in the ſtirring time, that they will not be clean turned underneath, the which ſhall be a greater hurt to the Corn, when it ſhall be ſown, and eſpecially in the time of weeding of the ſame, and for any other thing, make a deep hollow furrow in the ridge of the Land, and let the

Husbandmen look well that the Reſt balk it not; for if they do, there will be many thiſtles, and then they ſhall not make a clean ridge at the firſt ſtirring, and therefore it muſt be deep ploughed, or elſe it will not turn the weeds clean.

How to plough all manner of times of the year.

THe Ploughs being made & tempered, as I have already expreſſed, it will be convenient to inform the young Husbandman how he ſhould plough all times of the year. In the beginning of the year, after the Feaſt of the *Epiphany*, it will be time for the Husbandman to go to the plough; and if he have any Leys to fallow or ſow Oats upon, firſt plough them, that the Graſs and the Moſs may rot, and plough them a deep ſquare furrow, and in all manner of ploughings, let him look that his eye, and his hand, and his feet do agree, and that they are always ready the one to ſerve the other, to turn up much mould, and lay it flat, that it rear not up an edge; for if it rear an edge, the Graſs and Moſs will not rot, and if he ſow it with Winter-corn, as Wheat or Rye, as much Corn as toucheth the Moſs, will be drowned; for that the Moſs doth keep ſuch a wet and moiſture in it ſelf. In ſome Coun-

tries,

tries, if a man plough deep, he ſhall paſs the good Ground, and have but little Corn, but that Country is not fit for men to keep Husbandry upon, but to rear and bring up Cattel and Sheep; for otherwiſe they muſt go beat their Grounds with Mattocks, as they do in ſeveral places in *Cornwall*, and in ſome parts of *Devon-ſhire*.

How to plough for Peaſe and Beans.

FIrſt the Husbandman muſt take notice which is the moſt clayie Ground, let him plough that firſt; but let it lye a good ſpace before that he ſow it, becauſe the Froſt, the Rain, the Wind, and the Sun may ſoon cauſe it to break ſmall, to make much mould, and to ridge it, and to plough a ſquare furrow the breadth and the deepneſs all one, and to lay it cloſe to its fellow: For the more furrows, the more Corn ſerves, as hath been ſaid, for a general Rule for all manner of Corns, which may be proved at the coming up of all manner of Corns, if the Husbandman do but ſtand at the Lands end, and look towards the other end, and he ſhall eaſily perceive how the Corn groweth.

How all manner of Corn ſhould be ſown, and how much moſt commonly on an Acre.

FIrſt of Peaſe and Beans. An Acre of Ground by the Statute, that is to ſay, ſixteen foot and an half to the Perch or Pole, four Perches to an Acre in breadth, and eleven Perches to an Acre in length, may be very well ſown with two *London* Buſhels of Peaſe, that is but two Strikes in other places; and if there be the fourth part Beans, then will it require half a *London* Buſhel more; and if it be half Beans, it will have three *London* Buſhels, and more; if it be of Beans, it will have four *London* Buſhels fully, and that is half a Quarter, becauſe the Beans are great, and grow up ſtraight, and do not ſpread and grow abroad as Peaſe do. An Acre of good Beans is worth an Acre and a half of good Peaſe, becauſe there will be more Buſhels: And the beſt property that belongeth to a good Husbandman, is to ſow all manner of Corn thick enough, and eſpecially Beans and Barley; for commonly they are ſown upon rank Grounds, and good Ground will have the burden of Corn and of Wood: And as much ploughing and harrowing hath an Acre of Ground, and ſow thereupon but one Buſhel, and another ſoweth four Buſhels: And undoubtedly one Buſhel will not give

give ſo much Corn again as the four Buſhels, though the three Buſhels that be ſowed more be allowed and ſet apart. And one Buſhel and a half of white Peaſe or green Peaſe, will ſow as much ground as two Buſhels of gray Peaſe, and that is, becauſe they are ſo ſmall, that the Husbandman need not to take ſo great a handful. In ſome Countries they begin for to ſow Peaſe ſoon after *Chriſtmas*, and in ſome places they ſow both Peaſe and Beans under-furrow, and thoſe of reaſon muſt be ſowed betimes; but generally to ſow after *Candlemas*, is found to be a good ſeaſon, ſo that they are ſown towards the beginning of *March*, or thereabouts. But eſpecially let them be ſown in the old of the Moon: For the opinion of the moſt expert Husbandmen is, that they will cod the better, and ripen the ſooner. But I ſpeak not of Haſtings, for thoſe are to be ſown before *Chriſtmas*.

How to ſow Wheat and Rye.

ABout *Michaelmas* is the time to ſow both Wheat and Rye. Wheat is moſt commonly ſown under the Furrow, that is to ſay, caſt it upon the fallow, and then plough it under: and in ſome places they ſow their Wheat upon their Peaſe-ſtubble, the which is never ſo good as that which is ſown upon the

fallow; and that is uſed where they make fallow in a Field every fourth year. In *Eſſex* they uſe to have a Youth to go in the furrow before the Horſes or Oxen, with a Bag or a Hopper full of Corn, and he taketh his hand full of Corn, by little and little caſteth it in the ſame furrow. This Boy, as I ſuppoſe, ought to have ſomewhat more then ordinary diſcretion: howſoever there is much good Corn and Rye moſt commonly ſown above and harrowed, two *London* Buſhels of Wheat and Rye will ſow an Acre. Some Ground is good for Wheat, and ſome for Rye, and ſome for both, and upon that good Ground ſow blend Corn, that is, both Wheat and Rye, which is the ſureſt Corn of growing good for the Husbandmans Houſhold. And this Wheat that ſhall be medled with Rye, muſt be ſuch Wheat as will ſoon be ripe, and that is flaxen Wheat, pole-ear'd Wheat, or white Wheat. There are divers kinds of Wheats: Flaxen Wheat hath a yellow Ear, and bare, without Anys, and is the brighteſt Wheat in the Buſhel, and will make the whiteſt Bread. This Corn will wear the ground very much; the ſtraw of it is ſmall, but it grows very thick, and is but ſmall Corn. Pole-ear'd Wheat hath no Anys, 'tis thick ſet in the Ear, and it will ſoon fall out; 'tis greater Corn, and it will make white Bread. White Wheat is like pole-ear'd Wheat

in

in the Buſhel, but it hath Anys, and the Ear is four-ſquare, and it will make white Bread. In *Eſſex* they call flaxen Wheat, white Wheat. Red Wheat hath a flat Ear, an inch broad, full of Anys, it is the greateſt Corn, the broadeſt Blade, and the greateſt Straw, it will make white bread, though it be the ruddieſt of colour in the buſhel. Engliſh Wheat hath a dun Ear, it hath few or no Anys, and it is the worſt Wheat, except Peck-wheat. Peck-wheat hath a red Ear, full of Anys, thin ſet, and oft-times it is flintered, that is to ſay, ſmall Corn wringeled and dryed; it will not make white bread, but it will grow upon cold ground.

To ſow Barley.

EVery good Husbandman hath his Barley-fallow well dunged, lying ridged all the deep and cold of the Winter; the which ridging makes the Land to lye dry, and the dunging maketh it to be mellow and rank. And if a dry ſeaſon comes before *Candlemas*, or ſoon after, it ſhould be caſt down, and water furrowed between the Lands, and in the beginning of *March* ridge it up again; ſow in every Acre five *London* buſhels, or four at the leaſt: ſome years it may ſo happen that there is no ſeaſonable weather before *March* to plow the Barley-earth. The Husbandman as ſoon

as

as he hath ſowed his Peaſe and Beans, then let him caſt his Barley-earth, and ſhortly after ridge it again, ſo that it be ſoon before *April*: And if the time of the year be paſt, then ſow it upon the caſting. There are three kinds of Barleys, that is to ſay, Sprot Barley, long Ear, and Bear Barley: Sprot Barley hath moſt commonly a flat Ear, three quarters of an inch broad, and three inches long, the corners are very great and white, it is the beſt Barley. Long Ear hath a flat Ear, half an inch broad, and four inches and more of length: But the Corn is not ſo great, nor ſo white, it will ſoon turn and grow to the Oats. Bear Barley or big, ſhould be ſown upon light and dry Ground; it hath an Ear four inches long, or more, ſet four-ſquare, like Peck-wheat, it hath ſmall corns and little flour, and that is the worſt Barley, four *London* buſhels are ſufficient for an Acre: and in ſome Countries they do not ſow their Barley till *May*, and then moſt commonly upon gravelly or ſandy ground: But that Barley generally is never ſo good as that which is ſown in *March*. For if it be very dry weather after it is ſown, that Corn that lyeth above, lyeth dry, and hath no moiſture, and that little underneath cometh up, and when Rain falls, then that ſpreads that lyeth above, and oftentimes it is green when the other is ripe, and when it is threſhed, there is much light Corn in it.

To ſow Oats.

IN *March* is the time to ſow Oats, and eſpecially upon light Ground and dry, howſoever they will grow on wetter ground then any Corn elſe; for wet ground is good for no manner of Corn. Three *London* buſhels will ſow an Acre. There are three ſorts of Oats, that is to ſay, red Oats, black Oats, and rough Oats. Red Oats are the beſt, when they are threſhed they will be yellow in the buſhel; they are very good to make Oatmeal of. Black Oats are as great as they are, but they have not ſo much flour in them, for they have a thicker Husk, nor do they make ſo good Oatmeal. The rough Oats are the worſt Oats, and it quitteth not the coſt to ſow them. They are very light, and have long tayls, whereby they will hang each on the other. Theſe ſeveral kinds of Oats wear the ground very much, and maketh it as it were quick. A young Husbandman had need to be careful how thick he ſoweth all manner of Corn for two or three years, and to obſerve how it cometh up, whether it be thick enough or not; and if it be too thin, let him ſow thicker the next year; but if it prove well, let him hold his hands for three or four years; but if it be thin, let him recollect with himſelf, whether

whether it proceeds from the unſeaſonableneſs of the Weather, or through his thin ſowing.

How to ſever Peaſe, Beans, and Fitches.

WHen the Husbandman hath threſhed his Peaſe and Beans, after they be winnowed, if he ſow them or ſet them, let them be well reed with Sieves, and let him ſever in three parts the great from the ſmall, by which means he ſhall get in every Quarter a *London* buſhel, or thereabouts: For the ſma'l Corn lyeth in the hollow and void places of the great Beans, and yet ſhall the great Beans be ſold as dear. And therefore he that buyeth by whole ſale, and retaileth, muſt needs be a great gainer, and he muſt needs be a loſer, that ſets his Peaſe, Beans, and Fitches together, for then he loſeth his whole ſale; but ſever into three parts, there is the more gain.

How all manner of Corn ſhould be covered.

THe Corns being ſhorn and bound, and the Tythes caſt out, it will be time to cover them, ſtock them, or half throve them; but covering is the beſt way of all manner of white Corn: And that is to ſet four ſheaves on one ſide, and four ſheaves on the other ſide, and two ſheaves above of the greateſt, bound hard

hard nigh to the nether end, the which muſt be ſet upwards, and the top downwards, ſpread abroad for to cover all the other ſheaves. They will ſtand beſt in wind, and ſave themſelves beſt in rain; they ſhould be ſet on the ridge of the Land, and the ſide-ſheaves to lean together in the tops, and wide at the bottom, that the wind may go thorow to dry them. Peaſe and Beans ſhould be ſet on the ridge of the Land, four ſheaves together, the tops upwards, and writhen together, and wide beneath, that they may the better wither.

To load Corn, and mow it.

WHen all the ſeveral Corns are dry and withered enough, then let the Husbandman load them into the Barn, and lay every ſeveral ſort of Corn by it ſelf: And if it be a wet Harveſt, let him make many Mows, and if he have not houſing enough, then it is better for him to lay the Peaſe and the Beans without upon a Reke, rather then other Corn, and it will be better upon a Scaffold then on the ground, but then it muſt be well hedged for Swine and other Cattel. Beſides, the ground will rot the bottom, whereas the Scaffold ſaveth both hedging and rotting, but they muſt both be well covered. And the Husbandman may ſet Sheep or Cattel under the

the ſame Scaffold, for it will ſerve him inſtead of a houſe, if it be well and ſtrongly made.

How to know divers manner of Weeds.

IN the latter end of *May*, and the beginning of *June*, is the time for the Husbandman to weed his Corn. There are divers manner of Weeds, as Thiſtles, Kedlocks, Docks, Cockle, Drake, Darnel, Guldes, Hadods, Dog-fennel, Mathes, Tare, and divers other ſmall Weeds; but theſe already named, are thoſe that are moſt troubleſom. The Thiſtle is an ill weed, rough and ſharp to handle, which fretteth away the Corns nigh it, and cauſeth the Shears not to ſhear clean. Kedlocks have a leaf like Rapes, it beareth a yellow flower, and is an ill weed; it groweth in all manner of Corn, and hath ſmall cods, and groweth like Muſtard-ſeed. Docks have a broad leaf, and divers high ſpires, and very ſmall ſeed in the top. Cockle hath a long ſmall leaf, and it will bear five or ſix flowers, purple colour, as broad as a Groat; the ſeed is round and black, and may well be ſuffered in bread-corn, but not in ſeed, for therein is much flour. Drake is like Rye till it begin to ſeed; it hath many ſeeds like to Fennel-ſeeds, and hangeth downwards, and it may well be ſuffered in bread, for there is much flour

flour in the ſeed, and it is an opinion, that it proceedeth from Rye. Darnel groweth up ſtraight like to a high graſs; it hath long ſeeds on either ſide, there is much flour in the ſeed; it groweth much amongſt Barley, and it is ſaid to come from ſmall Barley. Guldes or Goldes hath a ſhort jagged leaf that groweth half a yard high, it hath a yellow flower as broad as a Groat; it is an ill weed, that groweth moſt commonly amongſt Barley and Peaſe. Haudod hath a blew flower, and a few little leaves, it hath five or ſix branches flowered in the top; it groweth commonly in the Rye upon lean ground, it doth little hurt. Dog-fennel and Mathes are both one, and in the coming up, is like Fennel; it beareth many white flowers, with a yellow ſeed, and it is the worſt weed that is, except Tare: it riſeth moſt commonly when great wet falleth ſhortly after the Corn is ſown. Tare is the worſt weed, and it doth never appear till the month of *June*, after a great wet, or a little before; it groweth moſt in Rye: It is ſomewhat like Fitches, but that it is much ſmaller; it will grow as high as the Corn, and with the weight thereof, pull it down flat to the Earth, fretting the Ears of it away: Wherefore I have ſeen Husbandmen mow down the Corn and it together; and alſo with ſharp hooks to reap it, as they do Peaſe, and make it dry, and then it

will

will be good Fodder. There are many other Weeds which do much harm, which here for brevity ſake I ſhall omit to mention.

How to weed Corn.

THe chief inſtrument to weed Corn, is a pair of Tongs made of wood, the further end of them being nicked to hold the weed the faſter. After a ſhower of Rain it is beſt weeding, for then they may be pulled up by the roots, ſo as never for to grow again. If it be dry Weather, then muſt the Weeder have a Hook with a Socket upon a little ſtaff a yard long; and this Hook ſhould be well ſteeled, and ground ſharp both behind and before; and in his other hand he ſhould have a forked ſtick of about a yard long, and with his forked ſtick he muſt put the weed from him, and he putteth the Hook beyond the root of the weed, and he pulleth it to him, and cutteth the weed cloſe to the Earth, and with his Hook he taketh up the weed, and caſteth it in the Raine, and if the Raine be full of Corn, it is better to ſtand ſtill when it is cut and withered; but let him beware that he do not tread too much upon the Corn, and eſpecially after that it be ſhot, and when that he cutteth the weed, that he cutteth not the Corn; and therefore the Hook ſhould not exceed to be above

above an inch wide. And when the weed is ſo ſhort, that he cannot with his forked ſtick put it from him, and with the Hook put it to him, then muſt he ſet his Hook upon the weed cloſe to the Earth, and put it from him, and ſo he ſhall cut it clean. With theſe two inſtruments he ſhall never need to ſtoop to his work. Dog-fennel, Goldes, Mathes, and Kedlocks are bad to weed after this manner, they grow upon ſo many branches, and are ſo cloſe to the Earth, and therefore they uſe for the moſt part to pull them up with their hands: but let them look well, that they pull not up the Corn therewithal. As for Tare, no weeding will ſerve turn.

How to mow and ſhear Barley and Oats.

BArley and Oats moſt commonly are mown, a man or a woman following the Mower with a Hand-rake half a yard long, with ſeven or eight teeth, in his left hand, and a Sickle in the right hand; with the Rake he gathereth as much as will make a ſheaf: And then he raketh the Barley or Oats by the tops, and and pulleth out as much as will make a band, and caſteth the band from him on the Land, and with his Rake and his Sickle taketh up the Barley or Oats, and layeth them upon the band, and ſo the Barley lyeth unbound three

or four days until it be dry weather, and then he binds it. And when that the Barley is led away, the Land muſt be raked, or elſe there will be much Corn loſt, and if the Barley or Oats lye, they muſt needs be ſhorn.

To reap or mow Peaſe or Beans.

PEaſe or Beans are reaped moſt commonly laſt, or elſe mown after divers manners; ſome with Sickles, ſome with Hooks, and ſome with Staff-hooks. In ſome places they lay them on Repes, and when that they are dry, they lay them together on heaps like Hay-cocks, and never bind them; but the beſt way is when the Repes be dry to bind them, and to ſet them on the ridge of the Lands three ſheaves together. Mowers geld not your Beans, that is to ſay, to cut the Beans ſo high, that the nether Cod grow ſtill in the ſtalk, and when they are bound, they are the readier to load or unload, to make a Reke, or to take from the Mow to threſh, and ſo are not the Repes.

How Rye ſhould be ſhorn.

AT the latter end of *June*, or the beginning of *Auguſt*, is the time to ſhear Rye, which ſhould be ſhorn clean, and faſt bound. In ſome places they mow it, the which is not ſo

ſo profitable a way for the Husbandman, but it is the ſooner done. For when it is mown, it will not be ſo faſt bound, and the Husbandman cannot gather it up ſo clean, but that there will be much loſt; it alſo taketh up more room in the Barn then ſhorn Corn doth: Nor will it keep or ſave it ſelf from rain or ill weather, when it ſtandeth in the cover, as the ſhorn Corn will do.

How to ſhear Wheat.

WHeat ſhould be ſhorn clean, and bound hard; but for a general Rule, let the Shearer take heed, that the ſhearers of all manner of Wheat-corn, caſt not up their hands haſtily, for then all the looſe Corns, and the ſtraws that he holdeth not in his hand, flyeth over his head, and are loſt, and alſo it will pull off the Ears, and that more eſpecially of the Corns that are very ripe. In ſome places they will ſhear their Corns high, to the intent to mow their ſtubble, either to thatch or to burn; if they ſo do, they have great cauſe to take good heed of the ſhearers: For if the Ears of the Corn crook down, or bend to the Earth, if the ſhearer be not very wary, and put up the Ear, or he cut the ſtraw, as many Ears as be under his Hook or Sickle, fall to the Earth, and are loſt: And when they mow the ſtub-

ble, it is a great hinderance to the profit of the ground. In *Sommerſet-ſhire* about *Zelcheſter* or *Martock*, they ſhear their Wheat very low, and all the Wheat-ſtraw that they purpoſe to make thatch of, they do not threſh it, but cut off the Ears, and bind it in ſheaves, and call it Rede, and therewith they thatch their Houſes. And if it be a new Houſe, they thatch it under their foot, the which is the beſt and ſureſt thatching that can be of ſtraw; for Crows, Pigeons, and the like, ſhall never be able to hurt it.

How to ſow both Peaſe and Beans.

LEt the Husbandman ſow his Peaſe upon clayie ground, and the Beans upon the Barley ground, for they require ranker ground then the Peaſe. Howſoever ſome Husbandmen are of opinion, that the big and ſtiff ground, as Clay, ſhould be ſown with big ware, as Beans: but I am of another mind; for if a dry Summer come, his Beans will fall ſhort. And if the ground be very good, put the more Beans to the Peaſe, and they will yield the better, when they are threſhed. And if it be very rank ground, as it is much at every Town-ſide, where Cattel do reſort, that plough not the Land, until it be ſown; for if he do, there will come up Kedlocks and other weeds. But let him ſow it with Beans; for

if

if he ſow it with Peaſe, the Kedlocks will hurt them. And when he finds a ſeaſonable time, let him ſow both Peaſe and Beans, ſo that they are ſown in the beginning of *March*. To know a ſeaſonable time to ſow, go upon the Land that is ploughed, and if it ſing or cry, or make any noiſe under thy feet, then 'tis too wet to ſow; but if it make no noiſe, and will bear the Horſes, then ſow in the Name of God. For the manner of his ſowing, let him put the Peaſe into the Hopper, and caſt a broad thong of Leather or Garth-web of an Ell long, let him faſten it to both the ends of the Hopper, and put it over his head like a Belt, and ſtand in the midſt of the Land where the Sack lyeth, the which is moſt conveniently for the filling of the Hopper, and let him ſet his left foot before, and take a handful of Peaſe. And when he hath taken up his right foot, then let him caſt the Peaſe from him all abroad, and when his left foot riſeth, let him take another handful, and when his right foot, then caſt them from him, and ſo at every two paces, he ſhall ſow a handful of Peaſe; let his foot and his hand agree, and then he ſhall be ſure for to ſow even. In his caſting, he muſt open as well his fingers as his hand: And the higher and the further that he caſt his Corn, the better ſhall it ſpread, except it be a great wind. And if the Land be very good, and will break ſmall in the plough-

ing, it is better to ſow, and after the Plough, then to delay and loſe time.

To make a Ditch.

IF the Husbandman will make his Ditch four foot broad, then it ſhould be two foot and a half deep: And if it be five foot broad, then it muſt be three foot deep, and ſo accordingly; and if it be but five foot broad, then it muſt be double-ſet, and the rather it ſhould be fenced, and the lower Hedge will ſerve.

To get Sets, and ſet them.

IF the Husbandman have paſtures, he cannot want for quick-ſetting, ditching, or plaſhing: When it is green, and cometh to be of age, let him get his quick-ſets out of ſome woody parts, and let them be of white Thorn and Crab-tree, for they are beſt: Holly and Haſel are good. If he dwells in the plain Country, then he may get both Aſh, Oak, and Elm, for thoſe will increaſe much wood in a ſhort ſpace. Let him ſet Oak-ſets and Aſh ten or twelve foot aſunder, and cut them as he doth his other Sets, and cover them over a little with Thorns, that Sheep and other Cattel eat them not. And alſo weed them clean in the *Midſummer* Moon, or ſoon after, for the weeds,

weeds, if they over-grow, will kill the Sets. But get no black Thorn for this uſe, for it will grow outward into the paſture, and do much hurt to the Graſs, beſides the tearing of the Wooll off the ſheep. It is a good time to ſet Quick-ſets, from the time the leaves are fallen, until our *Lady-day* in *Lent*. The Husbandmans ſandy or gravelly ground ſhould be firſt ſet, for it will ſoon dry, and then the Quick-ſet will take no root, except it meet with great wet; for the Moulds will tye it, if it be ditched in *February* or *March*, and likewiſe clayie ground, &c. Let the Husbandman make his Sets long enough, that may be ſet deep enough in the Earth, for then they will grow the better: Let them ſtand half a foot and more above the Earth, that they may ſpring out of many branches; and then let him take a Line and ſet it where he will have his Hedge, and let him make a Trench after his Line, and pare away the graſs, there let the Quick-ſets be ſet, and let him caſt it by Line, where the Earth of the Ditch ſhall lye, and dig up the Moulds, and ſpade graff deep, and put in the Sets, and dig up more Mould and lay upon that Set, and ſo to go through with it till he have ſet up his Sets, and let them lean towards the Ditch, and a foot from that, let him make his Ditch; for if he make it too nigh his Sets, the water may happen to cauſe the Sets to fall down.

To make a Hedge.

THe Husbandman muſt get his ſtakes of heart of Oak, for thoſe are beſt; Crab-tree, black Thorn, and Elder are good. Red Wethy is beſt in mooriſh ground; Aſh, Maple, Haſel, and white Thorn will do well for a time. Let him ſet his ſtakes within two foot and a half together, except that he have very good hedging, and lodge to bind with. And if it be double endered, it is much the better, and of greater ſtrength to the Hedge, and it will laſt much the longer; let him lay his ſmall Trouſe or Thorns that he hedgeth withal, over the Quick-ſets, that ſheep do not eat his Spring or buds of the Sets; let his ſtakes be well driven that the point take the hard Earth, and when that he hath made his Hedge, and endered it well, then let him take his Mall again, and drive down the endering, and alſo his ſtakes immediately: For with the winding of eddrings, he ſhall loſe his ſtakes, and therefore they muſt needs be driven new, and hardned, and that ſtake ſhall be driven the better when it is well bound.

To plaſh or plethe a Hedge.

IF the Hedge be ten or twelve years growing ſince it was firſt ſet, then let the Husbandman

bandman take a ſharp Hatchet or Hand-bill, and cut the Sets in a plain place cloſe unto the Earth the more half aſunder, and bend it downwards towards the Earth, and wrap and winde them together; but always let him be ſure that the top lye higher then the root a good quantity, for elſe the ſap will not run into the top kindly, but in proceſs of time the top will dye; and then let him ſet a little Hedge on the back-ſide, and it ſhall need no more mending for many years after; and if the Hedge be of 20. 24. 30. years of age ſince it was firſt ſet, then let him winde it at the nethermoſt boughs, and winde them together, and then cut the Sets in a plain place a little from the Earth the more half aſunder, and let him ſuffer it to hang downwards rather then upwards, and that for divers cauſes; then let him winde the boughs and branches thereof into the Hedge, and at every two foot or three foot to leave one Set growing not plethed. Let the tops be growing of five foot high, or thereabouts, to ſtand as a ſtake, if there be any ſuch, or elſe to ſet another, and to winde another that is plethed about them: And if the boughs will not lye plain in the Hedge, then cut it the more then half aſunder, and bind it unto the Hedge, then ſhall not the Husbandman need for to mend that Hedge but in few places, twenty years after or more: and if the Hedge be

be old, and be great Stubs or Trees, and they in the bottom, that beasts may go under or between the Trees, let him take a sharp Ax, and cut the trees or stubs that grow a foot from the Earth, or thereabouts, in a plain place, within an inch or two inches of the side: And let him again shave downwards, and let the top of one Tree lye over the root of another Tree, to plethe down the boughs of the same Tree to stop the hollow places. And if all the hollow and void places will not be filled and stopped, then let him scour the old Ditch, and cast it up new, and fill with earth all the void places; and if so be these Trees will not reach in every place to make a further defence, then let him double quick-set it, and ditch it new in every place that is needful, and set a Hedge thereupon, and let him over-lay the Sets to keep the sheep and Cattel from eating them.

To mend a High-way.

FIrst and principally let the Husbandman look that there be no water standing in the High-way, but that it be always current and running, nor that it have no more a stop in one place then in another. And in Summer when the water is dryed up, then to get gravel, and to fill up every low place, and to make the even somewhat descending or current one way

way or other; and if there be no Gravel or ſtones to get, yet fill it up with earth in the beginning of Summer, that it may be well hardned with carriage and treading upon, and it will be well mended, if the water may paſs from it: The which ſhould be well conſidered of, and that more eſpecially about *London*, whereas they are at much more coſt then needs. For there they ditch High-ways on both ſides, and fill up the hollow and low place with earth, and then they caſt and lay Gravel aloft: And when a great rain or water cometh, and ſinketh through the Gravel, and ſinketh into the Earth, the Earth ſwelleth and waxeth ſoft, and with treading, and eſpecially with carriage, the Gravel ſinketh, and falleth downwards, as its nature and kind requireth, and then it is in a manner as a Quick-ſand, that is difficult for any thing to go over it. But if he would make more Ditches in Summer-time when the water is dryed up, that the Workman may ſee all the hollow and low places, and then to carry Gravel, and fill it up as high as the other knoles are, then would it not ſwell or be turned into a Quick-ſand, and every Traveller might go beſides the High-way with his Carriage at his pleaſure: if this courſe were followed, it would be both good and neceſſary for that purpoſe.

How

How Forkes and Rakes ſhould be made.

THe good Husbandman hath his Forkes and his Rakes in a readineſs the Winter before, and they ſhould be got betwixt *Michaelmas* and *Martlemas*, beyked, and ſet even to be upright in his hand, that they may be hard, ſtiff and dry. And when that the Husbandman ſitteth by the fire, and hath nothing to do, then may he make them ready, and teeth the Rakes with dry wethy wood, and bore the holes with his Wimble both above and under, and drive the teeth upward faſt, and hard, and afterwards wedge them about with dry wood of Oak, for that is hard, and will dry, and never come out. And if the Husbandman get them in ſap-time, all the baking and drying that can be, ſhall not make them hard and ſtiff, but they will always be plying; for they are moſt commonly made of Haſel and Wethy, and thoſe are the firſt Trees that bloom, and eſpecially Haſel; for it beginneth to bloom as ſoon as the leaf is fallen: and if the Rake be made of green wood, the head will not abide upon the ſteale, and the teeth will fall out when the Husbandman hath moſt uſe of them, to the hinderance of his work, and the loſs of his Hay. Let him be ſure that his Rake and his Fork are upright in his

his hand; for if one end of the Rake, or the ſide of the Fork hangs downwards, they will neither be handſom, nor eaſie to work withal.

How to mow Graſs.

AT the latter end of *June* it will be time for the Husbandman to begin to mow his Meadows, for then they will be well grown: but howſoever they are grown, in *July* they muſt be mown, for divers cauſes: One is, that it is not convenient to have Hay and Corn both at work at one time. Another is, that the younger and greener the Graſs is, the ſofter and the ſweeter it will be when it is Hay, but it will require the more widdring; and the elder the Graſs is, the harder and dryer it is; and the harder and dryer it is, the worſe it is for all manner of Cattel; for the ſeeds will be fallen, which are in a manner a kind of Provender, and it will be the harder to eat and chew. And another cauſe is, that if dry weather come, it will dry and burn upon the ground, and waſte it ſelf away. Let the Husbandman have a care that his Mower mow clean, and hold down the hinder hand of his Sythe, that he do not indent the Graſs, and mow his ſwayth clean thorow to that that was laſt mown before, that he leave not a man between, and eſpecially in the common

common Meadow; but in the ſeveral Meadow it maketh the leſs charge, and that the mouldy Warpes-hills be ſpread, and the ſticks clean picked out of the Meadow in *April*, or the beginning of *May*.

To redde and make Hay.

WHen the Meadows are mowed, then they ſhould be redded, and laid upon the even ground; and if the Graſs be very thick, it ſhould be ſhaken with hands, or with a ſhort Pitchfork; for good redding is the chief point to make good Hay, for then it ſhall be widdered all alike, or elſe not: and when it is well widdered on the over-ſide and dry, then let the Husbandman turn it clean before Noon, as ſoon as the Dew is gone. And if he dare truſt the weather, then let him let it lye ſo all night, and on the next day let him turn it again before Noon, and towards the night make it windrows, & then in ſmall Hay-cocks, and ſo to ſtand one night at the leaſt and ſweat, and the next fair day caſt it abroad again, and turn it once or twice, and then make it into greater Hay-cocks: and to ſtand ſo one night or more, that it may unjoyn and ſweat; for if it ſweat not in the Hay-cocks, it will ſweat in the Mow, and then it will be duſty, and not wholeſom for the Cattel. And

when

when it ſtandeth in the Cocks, it is better for to load, and more Hay may be loaded at a loading, and the ſafter it will lye; which Hay cometh of a Graſs called Crow-foot, and groweth flat above the Earth, and beareth a yellow flower half a yard high and more; and hath many knots towards the coat, and it is the beſt Hay for Horſes and Beaſts, but it requires much more widdering then any other Hay, for elſe it will bepiſs it ſelf, and wax hot, and afterwards dusty. For to know when it is widdered enough, make a little Rope of the ſame, that you think ſhould be moſt green, and twine it as hard together between your hands as you can, and ſo being hard twined, let one take a ſharp Kniſe, and cut it cloſe by your hand, and the knots will be moiſt, if it be not dry enough. Short Hay and Ley-Hay are good for Sheep and other Cattel.

To remove and ſet Trees.

IF the Husbandman will remove and ſet Trees, let him get as many Roots with them as he can, let him be careful that he neither break nor bruiſe them. If there be any Root broken or much bruiſed, let him cut it off hard by the Root, as it is bruiſed with a ſharp Hatchet, otherwiſe the Root will dye. And if it be Aſh, Elm, or Oak, let him cut off all the

the boughs clean, and ſave the top whole. For if he make himſelf rich of boughs, he makes himſelf poor of thrift, for two cauſes. The boughs cauſe them to ſhake with wind, and to looſe the Roots; alſo he cannot get them ſo cleanly, but that ſome of the Roots muſt needs be cut, and then there will not come ſo much ſap and moiſture to the boughs as there did before: and if the Tree be long, cut off the top two or three yards. And if it be an Apple-tree or a Pear-tree, or ſuch other as beareth fruit, then let him cut away all the water-boughs, and the ſmall boughs, that the principal of them may have the more ſap; and if he make a mark which ſide of the Tree ſtands towards the Sun, he may ſet it ſo again, which is ſo much the better.

How to ſet Trees without Roots, and yet for them to grow.

THere are Trees that will ſpring Roots themſelves, and thoſe are certain Apple-trees that have knots in the Boughs, or Caſſes, or Wides, and ſuch other that will grow on ſlavelings; and likewiſe Poplars and Wethies they muſt be cut clean, and beſide the Tree that they grow on, and the top cut clean off eight or ten foot in length, and all the boughs between, and be ſet a foot deep or more in the Earth

Earth in good ground: There are four manner of Wethies, that is to say, white Wethy, black, red, and ofered Wethy. White Wethy will grow on dry ground, if it be set in the beginning of Winter, and will not grow on moorish ground. Black Wethy will grow better on moorish then on dry ground, and red Wethy in like manner. Ofered Wethy will grow best in watery and moist ground. And they are Trees that will soon be nourished, and they will bear much wood, and they should be cropped every seven or eight years, or else they will dye, but they must not be cropped in sap-time, nor no Trees else. In many places both the Lords, Freeholders, and Tenants will set such Wethies and Poplars in moorish grounds for to increase Wood.

Necessary things belonging to Grafting.

IT is no less necessary then profitable and pleasant for a Husbandman to be furnished with most sorts of Fruit, and therefore it will be convenient for him to know how to Graft. Therefore he is to be acquainted with what things he must have to graft withal. He must have a Grafting-saw, the which should be very thin and thick toothed; because it is thin, it will cut the narrower Kirfe, and the cleaner from bruising the Bark. And there-

here it is set in a Coppice piece of Iron six inches, for to make it stiff and big. He must also have a Grafting-knife of an inch broad, with a thick back to cleave the stocks withal. And also a Mallet to drive his Knife and his Wedge into the Tree, and a sharp Knife to pare the stock-head, and another sharp Knife to cut the Graft clean. And also he must have two Wedges of hard Wood or Iron; a long small cutter for a small stock, and a broader for a bigger stock to open the stock when it is cloven and pared, and also good tough Clay and Moss, and Bastes, and peeling of Withy or Elm for to bind them with.

How to Graft.

HE must get Grafts of the faireſt Lanſes he can find on the Tree, and let him be ſure that it have a good knot or joynt, and an even; then let him take his Saw, and ſaw into his Crab-tree in a fain plain place, pare it even with his Knife, and then let him cleave the ſtock with a great Knife and his Mallet, and ſet in a Wedge, and open the ſtock according to the thickneſs of his Graft; then let him take his ſmall ſharp Knife, and cut the Graft on both ſides in the joynt, but let him not paſs the midſt thereof; and let the inner ſide that ſhall be ſet into the ſtock, be a little

thinner

thinner then the outer-side, then let him presser his Graft into the stock, till that they close so clean, that they cannot put the edge of his Knife on the other side betwixt the stock and the Graft, and let him set them so that the tops of the Graft bend a little outward, and let him look that the wood of the Graft be set fit with the wood of the stock; and therefore he may not set the Barks meet in the inner side: then let him pull away his Wedge, and it will stand much faster. Let him afterwards take tough Clay like Marle, and lay it upon the stock-head, and with his finger lay it close to the Graft, and a little under the head to keep it moist, and that no wind come into the head at the cleaving; then let him take Moss, and lay thereupon for chinning of the Clay, and take a baist of white Wethy or Elm, on half a Brere, and bind the Moss, the Clay, and the Graft together; but let him be very careful that he break not the Graft, neither in the cleaving nor in the binding, and he must set something by the Graft, that Crows, and such ravenous and unruly birds do not light upon the Graft; for if they do, they will quickly break them.

What should be first Grafted.

PEars and Wardens should be grafted before any manner of Apples, because the

ſap cometh ſooner and rather into the Pear and Warden, then into the Apple-tree; and after St. *Valentines* Day it is time to graft both Pears and Wardens till *March* be come, and then to graft Apples to our *Lady-day*; and then let him graft that he hath got of an old Apple-tree firſt, for that will bud before the Graft got of a young Apple-tree lately grafted, and a Pear or Warden ſhould be grafted in a Pear-ſtock: and if he have got none, then let him graft it in a Crab-tree-ſtock, and it will do well. Some men graft them in white Thorn, and then it will be the harder and more ſtony. For all manner of Apples, the Crab-tree ſtock is beſt.

How to graft between the Bark and the Tree.

THere is another manner of Grafting, and ſooner done, and of ſooner growth, but it ſtands in great danger of the wind when it begins to grow. Therefore the Husbandman muſt ſpare his ſtock, and ſave the head thereof as he did before, but let him not cleave it; then let him take his Graft, and cut it on the joynt to the middle, and make the tenaunt thereof half an inch long, and a little more, all of one ſide, and part the bark away a little at the point on the other ſide; then he muſt have made ready a punch of hard wood with

a ſlope and a tenaunt on the other ſide like to the tenaunt of the Graft: Then let him put the tenaunt of the Ponche betwixt the bark and the wood of the ſtock, and pull it out again, and put it in the Graft, and let him be ſure that it joyn cloſe, or elſe let him mend it. And this courſe ſo taken, cannot fail; for then the ſap will riſe on every ſide, and it will ſpring ſo faſt, that if it ſtand on plain ground, the wind may poſſibly blow it beſides the head, for it hath no fixation in the wood. And this is the beſt remedy for the blowing off, to cut or crop away ſome of the nethermoſt leaves as they grow, and this is the beſt way to graft, and eſpecially a great Tree: and then let him clay it, and bind it as he did the other.

To nouriſh all manner of Stone-Fruits, and Nuts.

AS for Cherries, Damſons, Bullas, Plums, and the like, they may be ſet on the Stones, and alſo of the Siens growing about the Tree of the ſame, for they will ſooneſt bear. Filberts and Walnuts may be ſet on the Nuts in the Garden, and afterwards removed and ſet where he will. But when they are removed, they ſhould be ſet upon as good ground or better, or elſe they will not like.

To fell Timber.

IF the Husbandman have Wood to ſell, I adviſe him for to retail it himſelf, that he may have an eye to his Market; and if not, if he have a Baily or ſome other diſcreet Servant, to do it for him; and if it be ſmall Wood, to kidde it, and ſell it by the hundreds or by the thouſands; and if there be Aſhes in it, to ſell the ſmall Aſhes to Coopers for Garches, and the great Aſhes to Wheel-wrights, and the more mean and ordinary Trees to Plough-Wrights, the Crab-trees to Millers to make Coggs and Tongs. And if there be any Oaks, either great or ſmall, to fell them, and peel them, and ſell the Bark by it ſelf, and afterwards to ſort the Trees, the Poles by themſelves, the middle ſort by themſelves, and the greateſt by themſelves, and then to ſell them by ſcores and half ſcores, or hundreds, as he can, and to ſell it hard by the Earth; for one foot next to the Earth is worth two foot on the top. Let him cut his Timber long enough, that he may leave none on the top; & let them ſell the tops as they are at the great, or elſe dreſs them, and ſell the great Wood by it ſelf, and the Kid-wood by it ſelf, and to ſell the under-wood firſt at any time between *Martlemas* and *Holy-rood* Day. And all the Aſhes between

between *Martlemas* and *Candlemas*; and all Oaks as ſoon as they will peel, until *May* be done, and not after.

To fell Wood for the Houſe, or to ſell.

IF the Husbandman have any Woods to fell for his Houſhold to burn, or to ſell, then let him fell the under-wood Sire in Winter, that his Cattel and Beaſts may feed and brouſe the tops, and let him fell no more on a day then the Beaſts will eat the ſame day or on the morrow after. And as ſoon as it is well eaten and brouſed, then let him kid them, and ſet them on their ends, and that will ſave the bands from rotting, and they will be the lighter to carry, and they will burn the better, and lye in leſs room. And when that he ſhall bring them home to make a ſtack of them, let him ſet the netherm oſt courſe upon the ends, and the ſecond courſe flat upon the ſides and the ends, the ſides and the ends outward, and for the third courſe, let him fall on the ſide overthwart the other, and ſo to go them over until that he have laid all up. And when that he ſhall have occaſion for to burn them, to take the uppermoſt firſt.

To keep Spring Wood.

IN the Winter before the Husbandman will fell his Wood, let him make a good ſure Hedge, that no manner of Cattel may get in. And immediately after it is fallen, let it be carried away before the Spring riſe up; for elſe the Cattel that carry the Wood, will devour the Spring, and when the top is eaten or broken, it is a great hinderance to the growth and goodneſs of the Spring; for there where it is eaten, buds and iſſues out of many branches, and that not ſo far as the firſt would have been. A Park is beſt kept when there is neither Man, Dog, nor four-footed Beaſt therein, except Deer. And ſo a Spring is beſt kept, when there is neither man nor four-footed Beaſt within the Hedge: but if there be much graſs, and the Husbandman is unwilling to loſe it, then let him put in Calves newly weaned, and taken from their Dams, and alſo weaning Colts and Horſes not paſt a year of age. Let him take his Calves away at *May*, the Colts may go longer for their eating of any wood, but its dangerous both for the Calves, Foals, and Colts for ticks or for being louſie, the which will kill them, if they be not well looked to. In ſeven years it will requite the greateſt part of the coſt, but at ten years it is at the beſt,

beſt, and then the under-boughs ſhould be cut away, and made kid of, and the other will grow much the better and faſter: But if the under-boughs are not cut away, they will die, and then they are loſt, and will prove very hurtful to the Spring; for they will take away the ſap that ſhould make the Spring to grow the better.

How to ſhred, lop, and crop Trees.

IF the Husbandman hath any Trees to ſhred, lop, or crop for his Fire-wood, let him crop them in Winter (as hath been ſaid) that the Beaſts may eat the brouſe and the moſs of the boughs. And alſo the Yves, and when that they are brouſed and eaten, let him dreſs the wood, bow it clean, and cut it at every height, and rear the great wood to the top, and kid the ſmall boughs, and ſet them an end; and if he ſhall not have ſufficient wood, except that he head the Trees, and cut off the tops, then let him head them three or four foot above any Timber: and if it be no Timber, but a ſhaken Tree, or a Hedge-root full of knots, then let him head it thirty foot high, or twenty at the leaſt; for ſo far it will bear plenty of wood and boughs, and much more then if it were not headed. For a Tree hath a property to grow to a certain height, and when

when it arriveth to that height, it is at a ſtand, and groweth no higher; but in bredeh and in concluſion, the top will dye or decreaſe, and the body thrive; and if a Tree be headed and uſed to be cropped and lopped at every twelve or ſixteen years end, or thereabouts, it will bear much more wood in proceſs of time, then if it were not cropped, and be more profitable to the Owner.

It is the common Cuſtom with ſome to begin at the top of the Tree when it is to be ſhred or cropped, becauſe each bough ſhould lie upon the other, when that they ſhall fall, ſo that the weight of the boughs ſhall cauſe them to be the rather cut down; but that is not the beſt way, for that cauſeth the bough to ſhave down the nether part, and pulleth away the bark from the body of the Tree, the which for the future will cauſe the Tree to be hollow in that place, to the hurt of it. And therefore let the Husbandman begin at the nethermoſt bough firſt, with a light Ax for a hand to cut the bough, or both ſides a foot or two foot from the body of the Tree, and eſpecially to cut it more in the nether ſide, then the upper ſide, ſo that the bough fall not ſtraight down, but fall on the ſide, and then ſhall it not ſhave nor break any bark, and every bough will have a new head, and bear much more wood; and let the Husbandman, except he muſt needs

do

do it, avoid to crop the Tree, and that more eſpecially when the wind ſtandeth in the North, or in the Eaſt, and let him beware that he crop it not in ſap-time, for then it will dry within few days after, though it were an Oak.

Particular Secrets and choice Rules for Setting, Watering, and Ordering of ſeveral choice Plants, Roots, delectable Flowers and Herbs for Gardens. The ordering of the Summer-Garden for pleaſure and delight, as alſo for the more profitable increaſe of the Kitchin Garden: Together with Directions how to ſow and order for the Seaſon whatſoever belongeth to the Summer or Kitchin-Gardens; for Plants, Herbs, Roots, Seeds, &c. As alſo for the apteſt time to gather, dry, and preſerve them.

THe Husbandman or Gardiner, who would have Plants to grow to a greater bigneſs then ordinary, ought to remove them after four or five Leaves are come up, and to ſet them again, as out of one bed

bed beſtowed into another, and the like from one border into another, prepared at a certain diſtance aſunder, when ſhowers of rain have well moiſtned and ſoftned the ſame, being ſuch Plants (that before the ſetting) require to have tops of the Leaves, and ends of the Roots cut off, whereby they may the freelier grow up broad or big in the Roots.

The young Sets in the Garden (of pleaſant delight and ſmell) may the Owner of the Garden alſo beſtow in Borders in all ſeaſons (although more commendably in the Spring time) in breaking of the ſlips or branches of one years growth, for the bodies of the old ſtock, and in wreathing the ends about, ſo to ſet them a good depth in the Earth, the Moon at that time drawing near to the Change, which will much further the Sets in their ſooner taking of root.

The Marigold, Daiſie, Columbines, Primroſe, Cowſlip, Sweet John, Gilliflowers, Carnations, Pinks, and ſundry other delectable Flowers, if the Gardiner do change thoſe into Beds, they will increaſe the bigger, fairer, and doubler, the Moon at this time being conſidered to be increaſed of light, there muſt be a diligence to be beſtowed in the often watering of them.

The Plants (which are certain Leaves ſprung up) need not to be removed into other Beds, are

are Spinnage, Arach, Dill, Sperage, Sorrel, Chervil, Parſley, and divers others of the like ſort.

The Gardiner having digged and prepared his Garden into Beds and Borders, I will now ſhew him, as briefly as I can, the beſt order and manner for ſetting and ſowing of the chiefeſt Plants, Herbs, Flowers that are now moſt in requeſt.

When he ſets any Herbs, Flowers, or Plants, he muſt the next day a little moiſten the ground in the morning, and ſo keep it moiſt until they be well rooted by watering.

The beſt watering which is certain (except his Ground be new made with half Dung) is to make a hole with the Dibble a little for the Herb or Plant aſlope to the Root, and ſo to water the Root under the ground; for water rotteth and killeth above ground, and whatſoever he ſows, let him cover it with Earth, but as thin as he can; for if they be too deep ſet or ſown, moſt Seeds, Kernels, and ſuch like, will never come up.

When he ſets any thing, let him be ſure to make the Earth very wet, then let him overlay half a foot on dry Mould, making it ſo cloſe (with beating it with the Spade) as he can, then let him ſet in his Herbs or Plants, thruſting the Earth very hard to the Root.

Herbs for works may be watered; but Plants

muſt

muſt not be wet above ground, for fear of rotting.

Let him never water but in the morning, except in *June* or *July*, and then he may water about four of the clock in the afternoon.

For ſetting, ſowing, or planting, it is beſt when the weather is warm, nor the ground neither too wet nor too dry at the top, but ſo moiſt as that it will not ſtick to his ſhoe, as after a Froſt. And for the time of the Moon, I hold the ſecond day before the New Moon to be the beſt for moſt things but for Flowers, and that a little after the Change or New Moon.

The Ground which is to ſow at the Spring, muſt be digged at *Michaelmas*, with good Dung, and then let him trench the digging.

The beſt time for ſowing is *February*, *March*, *April*; but for the ſetting of Herbs, *March*, and the beginning of *April* is beſt: and thoſe Herbs which ſpring out of the ground in *February*, muſt be ſet in the month.

In the middle of *April*, or in the beginning of *May* (as the Moon ſhall happen to be in the Wane) let him dig a Ditch about a yard deep, and lay ſome three quarters of a Load of Horſe-dung therein, then let him cover the Dung over a foot thick with good Earth, laying his Seeds along on the Earth dry, and let him cover them an inch thick with light Earth,

Earth; and every night (until *May* be past) let him cover them with a wet Cloth or straw, to keep away the Frost, and uncover them in the day time: And let him take notice, that when the Cucumber hath three leaves, he may then remove them to their other places. The Pompion seeds should be set a finger deeper in the Earth; and the Cabbages should be removed when they are a handful high.

Parsnep seeds may be sown in *October* (in the Wane of the Moon) but if they prove not, let him sow more seeds in *February* following.

Carrots should be sown at the latter end of *April*, or the beginning of *May*.

Turneps grow best in sandy Earth, and should be sown at that time that Carrots are: but if they are required in *Lent*, let him sow them in *August*, at the Wane of the Moon.

Onions require a rank fat Ground, half dung; he must sow them in *February*: He may also sow Onion and Lettice seeds, and Radish seeds mingled together in one plot for Sallets, at the same time in a hot Ground: Let him set Onions for Scallions to seed in *October*.

Garlick requireth a temperate Ground, not too rank; and it is good setting of it in *February* and in *October*.

Leeks are for a rank Ground, and should be sown in *October*.

Radishes require such a Ground as the Onion

nion doth; ſow it in *February*, and it will laſt all the Summer, every month before Woodſeer, in the Wane of the Moon for fear of ſeeding; and he ſhall always have them freſh and young: but after Woodſeer he may ſow them at any time of the Moon.

Skerrots muſt be ſet in the Wane, about the latter end of *September*, or beginning of *October*. For the moſt part all Roots ſhould be ſown in the Wane of the Moon.

Lettice ſown in *Auguſt* will live all Winter; but if they are ſown in *March*, they will be ſo bitter, that they cannot be eaten.

Parſley ſhould be ſown after the beginning of *Auguſt*, and it will be freſh in the ſpring all the year; it loveth the ſhade: The ſeeds of Parſley and Marjoram will lye ſix weeks in the ground before they come up.

Hop may be ſown in ſeeds in *April*, but they will not laſt: The Roots that are young are good to ſet, but the ſlips are beſt.

Marigolds may be ſown in *Auguſt* for the Spring; he may remove the Plants about two inches long, and they will grow the bigger.

Alexander is ſown in *March* or *April*; he may remove the Roots, and they will grow the next year.

Borrage and Bugloſs are ſowed in the Spring, and dye that year.

Succory or Endive are ſown in *March* or *April*,

April, remove them before the ſpindle, and they will be the better.

Pennyroyal, the Roots parted, or the branches ſet in the ground, will grow.

Mints, either the Roots ſet, or the branches being cut in divers places, and ſet in the Earth, being wet, will thrive.

Savory ſowed in the Spring, commonly dyeth: but being removed, it will live in Winter.

Time is ſown or ſet in the Spring, both the ſeeds, ſlips, and roots of it will grow: keep it from ſeeding, and it will laſt three or four years.

Tanſie may be ſowed in *March* or *April*; the Roots being removed, will proſper.

Bloodwort may be ſowed in the Spring; its Roots being new-ſet, will laſt long.

Dandelyon may be ſowed in *March* or *April*; and may be ordered as the former.

Carduus Benedictus muſt be ſowed in the Spring, for it will dye in the Winter.

Wormwood is beſt to be ſet in the ſlips; it will laſt three or four years.

Clary is ſown in the Spring; it ſeeds the ſecond year, and then dyes.

Fennel may be known in the Spring and Fall; he may ſet the Roots, and it will continue many years.

Sweet Marjoram may be ſown in *April*, but

it will dye in the Winter; but if it be ſet, the ſlips will proſper.

Artichokes proceed of young Plants taken from the old ſtock: The beſt time to plant them is in *March* or *April*, two days before the Full of the Moon (yet ſome plant them in *Auguſt*) let him ſet no Plants, if he may have choice, but thoſe that have the bottom-knobs whole, neither let him pluck any plant from the ſtock, till it be ſtrong; and if the bottom-knobs are pulled off, and broken, it will hardly grow. And when that he would take the plants from the ſtock, let him dig the Earth half a foot deep round about the ſtock, then let him thruſt his Thumbes betwixt the ſtock and the plant, keeping the bottom whole and unbroken, &c.

Peaſe and Beans for the Garden muſt have the ſeed changed every year; if not, the increaſe will be very ſmall, and grow leſs and leſs; for in three years the great Rounſeval and great Bean will be no bigger then the wild ones, let him do what he can to his Ground, if he ſet or ſow them which grew there before; and ſo likewiſe it is with Corn, if the ſeed be not changed.

If his Peaſe be in *February*, let him ſet them an inch and an half deep; but if he ſow them in *March* or *April*, let him ſet them but an inch deep, but let him be ſure that he ſet them in the

the Wane of the Moon, ſome ſix or ſeven days before the Change, or elſe he will have a great Cod, and but ſmall Peaſe; and let him ſet them down eight inches aſunder, and he ſhall have Peaſe long, and have them often: Let him ſet them in ſeveral plots, ſome in *February*, ſome in *March*, and others in *April*: A Quart of Peaſe will ſerve to ſet a good plot of Ground. Peaſe and Beans will proſper well, being ſet under Trees; and being ſown in temperate wet weather, it will be a month or longer, before they will appear.

We ſhall now proceed to give other expert and certain Rules for ſowing, planting, and ſetting of the moſt delectable Flowers and Herbs in uſe, for the adorning of a Summer-Garden, or a Garden of pleaſure and delight.

Roſes are of ſeveral ſorts and colours, as White, Red, Damask, Province, Muſk, and ſweet Bryar, &c. Of all the Flowers in the Garden, this is the chief for beauty and ſweetneſs: Roſe-trees are commonly planted in a plot by themſelves (if the Gardiner have room enough) leaving a pretty ſpace between them for gathering. Now for him to get and ſet his plants, he muſt do thus: In the latter end of *January*, *February*, or the beginning of *March* (at the Increaſe of the Moon) go to ſome old Roſe-trees (but not too old) and the Gardiner ſhall find long young ſuckers or

branches, which ſprang up from the Root of the Tree the laſt year, let him dig the hole deep, that he may cut off thoſe ſuckers cloſe to the Root (but let him take heed of wounding the Tree) then let him fill up the hole again with Earth very cloſe and hard; theſe ſuckers muſt be young plants for young Trees: If the ſuckers have too many branches, let him cut them away, alſo the tops of them, they will take Root the better: Then where he intends to ſet them, let him dig holes in good ground, at the leaſt a foot deep, and ſet them a good depth, treading in the Earth hard about them, having a little Trench near them for watering, till they have taken Root. The Provoſt Roſes will bear Root the ſame year that they are ſet in, he may, if he pleaſe, plant Strawberries, Primroſes, and Violets amongſt his Roſe-trees, and they will proſper very well.

Gilliflowers, Carnations, or *July*-flowers, ſo called, becauſe in *July* they are in their prime and glory; theſe for beauty and ſcent are next to the Roſe, they are of ſeveral curious colours, and ſmell like to Cloves, and therefore of ſome are termed Clove-July-flowers: Theſe are to be ſet of young ſlips without ſhanks, taken from the old Body or Root; and when that the Gardiner ſets them, let him leave one joynt (next to the leaf) at the top of the Ground, ſo that the Ground be

above the top of the middle joynt; for if he ſet any part of the Leaves within the Ground, the Gilliflowers heads will never prove. Earthen pots are good, which have holes in or near the bottom, in which pots let him plant his Gilliflowers, and in dry weather, twice a week in the Summer-time ſet them in a Tub of water, for three hours or more. But let no water come to the top of the pot, but the Rain, the pot will ſuck up a ſufficient moiſture at the bottom-holes: The Gardiner ſhall never need to take in his pots but in frofty weather.

Wall-July-flowers uſually growing on Walls, for they delight to grow in Lime and Mortar: they will ſometimes ſeem dead in the Summer, and be green, and bear flowers in the Winter; they bear ſtore of ſeed, which he may ſow, and ſet the ſlips: If he will have them grow upon a Wall, let him dig little holes betwixt the Bricks and Stones with an old Knife, and put in the ſeed.

Tulips are very beautiful Flowers, but have no ſcent; they adorn a Garden well or a Houſe, their Roots are all like Onions, which the Gardiner muſt ſet in *January*, if there be no Froſt; and after they have done bearing, about *Michaelmas* let him take up the Roots out of the Ground, which will be double, and keep them dry in a Box againſt the next year.

Primroſes, ſo called, as they are the firſt Flowers in the Spring; they are very ſweet, growing both ſingle and double: when the Roots grow too great, part them in two or three quarters, and ſet them again, though they be flowered, they will grow.

Cowſlips are dainty ſweet Flowers, they alſo grow both ſingle and double; and if the Roots grow broad, you may ſever them as you did the Primroſe.

Harts-eaſe or Panſies, they are in ſhape almoſt like a Violet; they ſhed their ſeeds, and dye, but come thick up the next Spring.

Lavender is wondrous ſweet, both Leaf and Flower, good for ſhew; their Roots will grow double like a Tulip, which being parted muſt be new ſet.

Marigolds ſhew pleaſant, and are of a reaſonable ſcent; you may ſow them of ſeeds, or ſet young plants.

Daiſies are white, red, or mingled colours, they make a pretty ſhew in a Garden in the Spring; their Roots growing too thick and too broad, are to be parted and new ſet.

Flower-de-luces alſo make a great ſhew in a Garden; the Roots are to be ſevered and new ſet, which being dryed, ſmell ſweet.

Lillies that are red make a pleaſant ſhew, but have no ſcent; their Roots grow like Garlick double, but bigger, which being parted and new ſet, will grow again. White

White Lillies, their Roots are not like the red; their Roots also are to be parted, and set as the red Lilly.

Crocasses must be used and set as the Tulip; if the Gardiner set them in his Borders, they will make a pretty shew in the Spring.

Lupines proceed from a seed sown in *April* and *March*; they bear a delicate flower, and the green leaves are of a strange shape; they bear Cods like small Beans, in which are seed.

Holy-hocks are white and red, he may sow them of seed, or plant the Root.

Piony must have the Roots parted and set, the green leaves spread very broad, it beareth a great beautiful red flower. The seed of it must be sown in the Spring.

French Mallows make a handsom shew; they are also to be sowed in the Spring.

Saffron floureth about *Michaelmas*, when the flowers fade, it is to be set of Roots, which ought to be removed every third year about *Midsummer*.

Poppy hath a very fair flower, and of a pretty colour; the seed of it must be sowed in the Spring.

Batchelers-buttons are sowed in the Spring-time, or the Roots may be planted.

Sweet Sisely hath a pleasant scent; he may sow the seeds, or part the Roots and set them.

Rose-Campions may likewise be sowed of seed, or the Roots planted.

Flower of the Sun groweth very high, and beareth a great yellow flower, as big as the crown of a Hat; it openeth and shutteth with the Sun (like the Marigold) the seeds must be set in *February* or *March*, about a finger deep.

Strawberries are white, red, and green; but the best Strawberries are gathered out of the Woods, which have Roots well bearded: Let him set them in *January*, *February*, or in *August*, three inches one from the other, in the beginning of the last Quarter of the Moon.

I shall next follow the order of the growing and setting of green sweet Herbs for the Summer-Garden.

Angelica groweth big and broad, and lasteth long; you may sow it of seeds in the Spring, and the Roots may be removed after the first year. Lonage groweth much like to Angelica, and it is to be ordered in the like manner.

Anniseeds are produced of seeds sowed; they dye the first year, and so doth Coriander.

Coast-Mary may be sowed of seeds, or the Roots parted and set in *March*, are best.

Featherfew is to be sowed in *March* or *April*.

Oculus Christi is best to be sowed of seeds,

or

or upon any remove of the young plants, and new ſet them.

Herb of Grace, or Rue, the beſt way to ſet it is of ſlips; it is green moſt part of the year, and thrives beſt in the ſhade: Southernwood is to be ordered like Rue.

Dutch-box grows green moſt part of the year, it is very handſom for Works and Borders; he may part the Roots and ſet them.

Roſemary is a tender Herb, the beſt ſetting of it is in *April*, or in the end of *March*, the Gardiner muſt ſet ſuch as have no Bloſſoms, and as he takes it from the branch, but by no means let him ſlive it, or tear the ſlips, but cut them off a little from the body, leaving ſome few leaves behind on the piece, and then it will grow again, otherwiſe the body being hurt, it will never grow.

Bay-roots will proceed from the Bay-berry, being ſet in the Spring, or he may plant the young ſuckers which ſpring from the Root.

Hony ſuckles or Wood-bine, the Gardiner muſt get them in Woods or Hedges in the Fields, but let him dig enough to have their Roots; prune them, and plant them againſt the ſide of a Houſe, or a Wall, or Pole, and they will yield a moſt pleaſant ſhade or a comfortable ſcent: They muſt be taken up in *January*, *February*, or the beginning of the Spring.

Hedges

Hedges or Quick-sets in his Gardens, may be made either with suckers of Goosberry-trees, Currants, Privet, or Hauthanethorn, planted in *January* and *February*, at the Increase of the Moon.

Eglantine or Sweet-Bryar is to be set on suckers also, and in those months also, as the former; they will grow from the red Hips, which they bear, but it will be long before they come to any bigness.

In *August*, four days after the Change, or three days before the full Moon, let the Gardiner cut all his Winter-herbs within an handful of the ground, then will they get head against the Winter, and it will preserve them the better from hard weather; and in the end of *September*, let him sift the Earth or a good mould upon them, to cover the Roots well, otherwise the Frost and Rain will bear the Earth from the Roots, that the Herbs will be in danger of being killed. And such Herbs as the Gardiner intends to keep against Winter, let him cut them often, to keep them from seeding, for seeding doth kill most Herbs; by this means they will live the better in Winter; but let him have a care that he do but seldom cut his Herbs in the Wane of the Moon.

To have Flowers great, let him remove them once a year, the second or third day before

fore

fore the full Moon, and ſo plant them in *Auguſt*, as in *March* the weather being warm, and the ground wet, they will grow.

To dry Herbs for Broths or for Cheſts, he muſt make uſe of ſet Plats in the Sun in *Auguſt* in their Flowers, as Winter-ſavory, Time, Marjoram, Pennyroyal, Mints, Balm, Roſemary tops, Marigolds, Lavender, Roſe-leaves, &c. Let him gather them as he dryes them, when he ſees the morning fair and hot, and the Herbs dry.

The beſt and worthieſt Roots of Herbs, for the moſt part are to be gathered in apt and fit ſeaſons and places, when that the leaves are beginning to fall off, and the fruits and ſeeds already ſhed, ſo that the ſeaſon be fair: for done in a rainy day, the Roots will be rendered the weaker, when they are filled with unneceſſary moiſture.

The flowers in like manner are to be gathered, as the Borrage, Bugloſs, and all others of like ſort, when they are wholly opened, and before they are feeble, except the flowers of the Roſe and Jeſamine, which ought to be gathered for the better and longer keeping, before that they are much, or rather but a little opened.

The Leaves and whole Herbs are to be gathered, when that they are come to their growth and perfection.

The

The Fruits, and Melons, Cucumbers, Citrons, and Gourds, when they appear yellow, and are come to their perfect growth and perfection.

The seeds in like condition are to be gathered when they are well ripened, and before they shed on the Earth; but those that do remain on the Earth, after the Herbs are throughly dryed, ought to be rubbed forth with the hands, and kept unto the time of sowing.

Let the Gardiner remember that seeds ought to be gathered in a clear season, and in the Wane of the Moon.

And let the Gardiner take this for a general Rule to be observed, That always all those things that are to be gathered, as the Herbs, Flowers, Roots, Fruits, and Seeds, that they are to be gathered in a fair and dry season, and in the decrease of the Moon.

The Herbs which the Owner intends to keep, are to be pickt, and to be preserved by cleansing; let them be dryed in the shade, the place being open towards the South, not moist, and free from smoak and dust.

These are to be put in Leather-bags rather then Canvass, the mouths at the hanging up fast tyed, or into wooden Boxes of the Box-tree, to the end that the Herbs may not lose their proper virtues.

The

The Flowers ought to be dryed no otherwiſe then by the Sun at Noon, but more eſpecially through the ſharp heat of the ſame, together with the heat of the Air, unleſs it be our Roſe of the Garden, which is to be preſerved for a longer time, and it is to be longer dryed, and more moderately in a high place, ſtanding open to the Sun at Noon, or ſo that the Sun-beams enter into, but yet touch not the Roſe-leaves.

The beſt way for drying of Flowers, is to lay them in a temperate place, free from moiſture, duſt, and ſmoak, and to ſtir them to and fro, that they corrupt not in the drying, ſo as to loſe neither their colour nor their natural ſavour.

The finer ſeeds are to be preſerved in Leather-bags, or in earthen Veſſels, having very narrow mouths, or elſe in Glaſs-bottles, or Gally-glaſſes very well ſtopped.

But the ſeeds of Onions, Chibols, and Leeks, as alſo of Poppy, are to be preſerved in husks and heads.

For the preſerving of Roots, the Gardiner ought to learn and exerciſe two means; the one for keeping of them freſh, and the other for the round Roots, as the Navew, Radiſh, Carrot, and other like ſorts, for to preſerve them dry.

The way and means to preſerve Roots freſh,

freſh, is to bury them in a Cellar, in Gravel or Sand well turned upon them, or in a Garden-ground reaſonably deep digged, even as he doth for the Radiſh and Navew in the earth, that he may enjoy the commodity of them for the greater part of the Winter: to preſerve Roots dry, the Gardiner (after the plucking of the Roots out of the Earth) ought to waſh them very clean with Conduit or Spring-water; afterwards to cut away all the ſmall and hairy Roots; which done, to dry them in a ſhadowy place, free from the beams of the Sun, if ſo be that they are ſlender or thin Rind, as the Roots of the Fennel, Succory, Parſley, Endive, Borrage, Bugloſs, Sperage, and ſundry ſuch like: but if the Roots are thick of Rind, of a groſs Eſſence, and big, then muſt the Gardiner lay them dry in the Sun at Noon-day, as the Roots of Gentian, the Earth-Apple, Briony, Rapontick, Ariſtolocia, or any others like them.

All the Field-plants, Flowers, and Roots, are longer in Nature, but in ſubſtance inferior to the Garden-plants, &c.

Among wild Plants, thoſe growing on the Mountains do excel the others in property.

Amongſt all Plants, thoſe are of a ſtronger Nature, more eſpecially thoſe that are of a livelier colour, better taſte and ſavour.

The Herbs which one would uſe for the Kitchin,

Kitchin, ought rather to be gathered with a Knife, somewhat above the Earth, when they are shot up to their perfect growth, as the Beets, Succory, Arach, Borrage, Marigold, Colewort, Endive, Clary, Rocket, Basil, Marjoram, Mercury, Lettice, Parsley, and many others.

Thus I have, as briefly as I could, discoursed of Fruits, sundry Herbs, and Flowers, how they are properly to be gathered, and according to their diversity to be preserved; all which Instructions and rare Secrets I have in part borrowed out of the Treasures of the best and most experienced Professors of Husbandry; together with what I have got through my earnest importunity from some of my most intimate Friends. I beseech God to vouchsafe his Blessing to these my poor Endeavours.

Of Bees.

IN the keeping of Bees there is little charge, but they require good attendance to the time that they shall cast the Swarm. To which purpose it will be convenient that the Hive be set in a Garden or an Orchard, where as they may be kept from the North-wind, and the mouth of the Hive towards the Sun. In *June* and *July* they do most commonly cast, and they should have some low Trees nigh to them

before

before the Hive, that the Swarm may light upon; and when the Swarm is knit, take a Hive, and ſplent it within with three or four ſplents, that the Bees may knit their Combs unto it, and anoint the ſplents and ſides of the Hive with a little Honey; and if he have no Honey, let him take ſweet Cream, and then ſet a ſtool or a form nigh to the ſwarm, and lay a clean waſhed ſheet upon the ſtool, and then let him hold the ſmall end of the Hive downwards, and ſhake the Bees into the Hive, and then preſently ſet it upon the ſtool, and turn the corners of the ſheet over the Hive: Let him leave one place open, that the Bees may go in and out; but let him do this quietly, for he muſt not in any wiſe fight or ſtrive with them: and let him lay Nettles on the boughs where they were knit, to drive them from the place; and then let him watch them all that day, that they go not away; and at night, when all are gone up to the Hive, let him take it away, and ſet it where it ſhall ſtand; and take away the ſheet, and let him have Clay ready tempered, to lay about it upon the board or ſtone where it ſhall ſtand, that no wind come in; but the board is better and warmer. Let him leave a hole open on the South-ſide of three inches broad, and an inch of height, for the Bees to enter in and out. And then let him make a covering of Wheat

or Rye-straw to cover, and house the Hive above, and let him set the Hive two foot or more above the Earth upon the stakes, so that a Mouse nor any other Beasts or Vermin may come near it. But if a swarm be cast late in the year, they should be fed with Honey in the Winter, and laid upon a thin narrow board or Slate or Lead put into the Hive, and another thin board should be set before every Hives mouth, that no wind come in, and to have four or five little nicks made in the nether-side, that a Bee may come out or go in, and so fastned, that the wind blow it not down; and so ordered, that he may take it up when he will. That Hive that is fed, let the mouth of it be stopt clean, that other Bees come not in; for if they do, they will fight and kill one another. And let him beware, that no Wasps come into the Hive; for they will kill the Bees, and eat the Honey. There is also a Bee called a Drone, which is greater then another Bee: This Drone will eat the Honey, and gather nothing, and therefore they should be killed; it is a common saying, that she hath lost her sting, and that therefore she will not labour as the others do.

How to keep Beasts and other Cattel.

IF a Husbandman would keep Cattel well to his profit, he must have several Closes and

Pastures to put them in, the which should be well quick-setted, ditched, or hedged, that at his pleasure, he may sever his biggest and strongest Cattel from the weakest, and especially in Winter time, when they shall be foddered. And though a man be but a Farmer, and shall have his Farm twenty years, it is less cost for him, and more profit for him to quick-set, ditch, or hedge, then to have his Cattel go before the Herdsmen; for let the Husbandman spend in three years as much money as the keeping of his Beasts, Swine, and Sheep do cost him in the years. Then always after he shall have all manner of Cattel with the tenth part of the cost, and the beasts shall like much the better, and by this means the Herdsman shall have for every beast two pence a Quarter, or thereabouts. And the Swine-herd will have for every Swine at least a penny. Then he must have a Shepherd of his own, or else he shall never thrive: Then reckon Meat, Drink, and Wages for his Shepherd, the Herdsmans, and the Swine-herds Hire: these charges will double his Rent, or arise nigh to do so, except his Farm be above forty pounds *per Annum*. Now let us compute what these Charges will come to in three years; but let him lay out as much money in Quick-setting, ditching, and hedging, and in three years he shall be discharged for ever, and much of his

labour,

labour, he and his Servants may do with their own hands, and ſave much money. And then hath he every field in ſeverality, and by the aſſent of the Lord and the Tenants, every Neighbour may exchange his Lands with the other. And then ſhall his Farm be twice as good in profit to the Tenant as it was before, and as much Land kept in tillage; by this means the rich man ſhall not over-eat the poor man with his Cattel, and the fourth part of the Hay and Straw ſhall ſerve his Cattel better in a Paſture, then four times ſo much will do in a Houſe, and leſs attendance, and the Cattel ſhall like the better.

To buy fat Cattel.

IF the Graſier ſhall buy fat Oxen or Kine, let him handle them, and ſee that they are ſoft on the fore-crop behind the ſhoulder, and upon the hindermoſt Rib, and upon the Huckle-bone, and the Nache by the Tayl: Let him ſee that the Ox have a great Cod, and the Cow a great Navel; for then it is very likely that they are well tallowed. And let him take heed where he buys any lean Cattel or fat, and of whom, and where it was bred: For if he buy out of a better ground then he hath of his own, that Cattel will not like with his. Alſo let him look, that there be no man-

ner of ſickneſs amongſt the Cattel: whether there be any Murren or Long-ſaught amongſt them, which may prove very dangerous; for a beaſt may take a ſickneſs ten or twelve days or more before it appears on them.

To buy lean Cattel.

THat Husbandman that will thrive, muſt be well furniſhed with Cattel, he muſt rear and breed ſome Calves and Foals, or elſe he muſt be a Buyer. If he buy Oxen for the Plough, let him look that they are young and not goutty, neither broken of Hair, of Tayl, or of Pizzle. If he buys Kine for the Pail, let him ſee that they are young, and likely to give good Milk; and let him be ſure that he feed her Calves well. And if he buy lean Oxen, let him feed and fat them, the younger they are, the better they will feed, and ſooner gain fleſh: but (as we have ſaid) let him look well to the Hair, that it ſtare not, and that the Beaſt lick himſelf, be whole mouthed, and want no teeth. And though he have the Gout, and be broken both of Tayl and Pizzle, yet will he feed. But the goutty Ox will not be driven far. Let him alſo be ſure, that he have a broad Rib and a thick Hide, that he be looſe-skinned, that it ſtick not hard nor ſtrait to his Ribs, for then he will not feed.

To

To rear Calves.

IT is convenient for a Husbandman to rear Calves, and eſpecially thoſe that come betwixt *Candlemas* and *May*; for at that ſeaſon he may beſt ſpare Milk, and by that time the Calf ſhall be weaned, there will be Graſs enough to put him into, and at Winter he will be big enough to ſave himſelf amongſt other beaſts, with a little favour. The Dam of the Calf ſhall bull again, and bring another by the ſame time of the year: but if he ſhall tarry till after *May*, the Calf will be weak in Winter, and the Dam will not bull again, but oftentimes go barren. And if he ſhall rear a Calf that cometh after *Michaelmas*, it will be coſtly to keep the Calf all the Winter-ſeaſon at Hay, and the Dam at hard meat in the Houſe, as they uſe in the plain Champion Countries. And a Cow ſhall give more Milk with a little graſs and ſtraw, lying without in a Cloſe, then ſhe ſhall do with Hay and Straw, lying in a Houſe, for the hard meat dryeth up the Milk. But he that hath no Paſture muſt do as he may: but yet it is better for the Husbandman to ſell thoſe Calves, then to rear them, becauſe of the coſt, and alſo for the profit of the Milk to his Houſe, and the rather the Cow will take the Bull. If the Husbandman

go with an Ox-plough, it is convenient that he rear two Ox-calves, and two Cow-calves at the leaſt to uphold his ſtock; and if he rear more, it will be the more profitable for him. It is better for the Husbandman to wean his Calves at Graſs, then at hard meat, if they went to Graſs before. And that man that may have a Paſture for his Kine, and another for his Calves, and water in them both, may rear and breed good Beaſts with little coſt. And if the Husbandman wean his Calves with Hay, it will make them big-bellied, and they are the likelier to rot when they go to graſs. In Winter they ſhould be put in a Houſe by themſelves, and given Hay over night, and put in a good paſture in the day time, which will render them much the better to handle when they ſhall be Kine or Oxen.

To geld Calves.

IT will be a fit time to geld Calves in the old of the Moon, when they are ten or twenty days old; for then is leaſt danger, and the Ox ſhall be the higher, and the longer of body, and the longer horned. And that may be thus proved: Take two Ox-calves, both of them of one kind, one making, and both of one age, geld one of them, and let the other go forth, and be a Bull. And put them both

in

in one paſture until they are four or five years old, and then ſhall you ſee the Ox-calf far greater every way then the Bull. There is no other cauſe of this but the gelding. And if he geld them not till they are a year old, there will be the more danger, and he will be leſs of body, and ſhorter horned.

Of which is the greateſt loſs, a Lamb, a Calf, or Foal.

IT is leſs damage to a Husbandman to have his Cow to caſt her Calf, then an Ew to caſt her Lamb; for the Calf will ſuck as much milk ere it be fit to be killed, as it is worth, and of the Ew cometh no profit of the milk, but the Lamb. Howſoever they uſe in ſome places to milk their Ews when they have weaned their Lambs; but that is a great hurt to the Ews, inſomuch that it will cauſe them that they will not take the Ram at the time of the year, becauſe of their leanneſs, but grow barren. And if a Mare caſt her Foal, that is thrice ſo much loſs. For if the Foal come of a good Breed, the loſs is ſo much the greater, and in a ſhort time the Foal may be ſold for as much money as would buy many Calves and Lambs.

What Cattel ſhould go together in one Paſture.

BEaſts alone, nor Horſes alone, nor Sheep alone, except it be Sheep upon a very high Ground, will not eat paſture even, but leave many in Fees and high Graſs in divers places, except it be over-laid with Cattel. Therefore we may the better take notice, that Horſes and Beaſts will agree well in one Paſture; for there is ſome manner of Graſs that a Horſe will eat, that a Beaſt will not, as the Fitches, Flaſhes, and low places, and all the hollow Bundes and Pipes grow therein. But Horſes and Sheep will not ſo well agree, except it be Sheep to feed; for a Sheep will go on a bare Paſture, and will eat the ſweeteſt Graſs, and ſo will a Horſe, but he would have it longer. Howſoever he will eat as cloſe to the Earth as a Sheep, but he cannot ſo ſoon fill his belly. To a hundred Beaſts the Husbandman or Graſier may put in twenty Horſes. If it be low ground, and if there be graſs enough, he may put in an hundred Sheep, and ſo after the rate the paſture more or leſs: and after this manner they may feed or eat the Cloſe even, and leave but few tufts. But if it be high ground, let him put in more Sheep, and leſs Beaſts, and Horſes. Milch Kine and draught Oxen will eat a Cloſe much barer then as many fat Kine

and

and Oxen. A Milch Cow may have too much meat; for if ſhe grow fat, ſhe will the rather take Bull, and give leſs milk: for the fatneſs ſtoppeth the Pores and the Veins that ſhould bring the milk to the Paps. And therefore mean Graſs is beſt to keep her in a low eſtate. And if a Cow be fat when ſhe ſhould calf, then is there great hazard of her, and the Calf ſhall be the leſs; but the Husbandman cannot allow his Draught-Ox too much meat, except it be the after-mathe of a low-mown Meadow, for that will cauſe him to have the Girte, and then he is not ſo fit to labour. And if there be too much Graſs in a Cloſe, the Cattel ſhall feed ſo much the worſe, for a good bite to the Earth is ſufficient; for if it be long, the Beaſts will bite off the top and no more, for that is ſweet, and the other lyeth ſtill upon the ground, and rotteth, and no Beaſts will eat it but Horſes in Winter: But theſe Beaſts, Horſe, and Sheep may not be foddered togethe: in Winter; for then they ſhould be ſevered, for elſe the Beaſts with their horns will gore both the Horſes and the Sheep in their bellies. It will be neceſſary to make ſtanding Cratches to caſt their Fodder in, and the ſtaves ſet right enough together for pulling their Fodder out too haſtily for ſhedding. And if it be laid upon the Earth, the fourth part thereof will be loſt: but if he

is

is forced to lay it on the Earth, let him lay it every time in a new place, for the old will ſpoil the new.

Of Swine.

THe Husbandman that is well furniſhed with other Cattel, it will alſo be very profitable for him that he have Swine: It is a common ſaying, That he that hath Sheep, Swine, and Bees, ſleep he or wake he, may thrive; and the ſaying is, becauſe that from theſe things the greateſt profit ariſeth with the leaſt coſt. Therefore let the Husbandman conſider with himſelf how many Swine he can conveniently keep: let them be Boars and Sows all, and no Hogs. And if he be able to rear ſix Pigs a year, then let two of them be Boars, and two of them Sows, and ſo to continue after that rate: For a Boar will require as little keeping as a Hog, and is much better then a Hog, and hath more meat on him, and is ready at all times to cut in the Winter ſeaſon, and to be laid in Souſe. And a Sow before ſhe be fit to be killed, ſhall bring forth as many Pigs and more, as ſhe is worth, and her body is not the worſe, but will be as good Bacon as a Hog, and asketh as little keeping, but at ſuch a time as ſhe hath Pigs. And if his Sow hath more Pigs then he intends to rear, let him ſell them, or diſpoſe of them for his

his Family; but let him rear thoſe Pigs that come about *Lent*, eſpecially at the beginning of Summer; for they cannot be reared in winter for cold, without great coſt.

Of the Properties of Horſes.

A Good Horſe hath ſeveral properties, two of a Man, two of a Bauſon or Badger, four of a Lyon, nine of an Ox, nine of a Hare, nine of a Fox, nine of an Aſs, ten of a Woman.

The two properties that a Horſe hath of a Man, is to have a proud heart; the ſecond is to be bold and hardy.

The two properties that a Horſe hath of a Bauſon or Badger, is firſt to have a white Raſe or Ball in the Forehead; the ſecond to have a white Foot.

The four properties that a Horſe hath of a Lyon, is firſt to have a broad Breaſt, the ſecond to be ſtiff-docked, the third to be wild of Countenance, the fourth to have good Legs.

The nine properties that a Horſe hath of an Ox, is firſt to be broad-ribbed, the ſecond to be low-brawned, the third to beſhort-paſturned, the fourth to have great ſinews, the fifth to be wide betwixt the Challes, the ſixth to have a great Noſe, the ſeventh to be big on the

the Chine, the eighth to be fat well fed, the ninth to be upright ſtanding. and

The nine properties that a Horſe hath of a Hare, is firſt to be ſtiff-eared, the ſecond to have great Eyes, the third to have round Eyes, the fourth to have a lean Head, the fifth to have lean Knees, the ſixth to be light of Foot, the ſeventh to turn upon a light Ground, the eighth to have ſhort Buttocks, the ninth to have two good Fillets.

The nine properties that a Horſe hath of a Fox, is firſt to be prick-eared, the ſecond is to be little-eared, the third is to be round-ſided, the fourth is to be ſide-tayled, the fifth is to be ſhort-legged, the ſixth is to be black-legged, the ſeventh is to be ſhort-trotting, the eighth is to be well-coloured, the ninth is to have a little Head.

The nine properties that a Horſe hath of an Aſs, the firſt is to be ſmall-mouthed, the ſecond is to be long-reined, the third is to be thin-creſted, the fourth is to be ſtrait-backed, the fifth is to have ſmall Stones, the ſixth is to have Lath-legs, the ſeventh is to be round-footed, the eighth is to be hollow-footed, the ninth is to have a rough Foot.

The ten properties a Horſe hath of a Woman, the firſt is to be merry at meat, the ſecond is to be well-paced, the third is to have a broad Forehead, the fourth is to have broad Buttocks,

Buttocks, the fifth is to be hard of Ward, the ſixth is to be eaſie to be leapt upon, the ſeventh is to be good at a long Journey, the eighth is to be ever buſie with the Tongue, the ninth is to be chewing the Bridle, the tenth is to be active and ſtirring under a man.

Of the divers Diſeaſes of Cattel, and the Remedies thereof, and firſt of the Murrain.

THe Murrain proceeds from a rankneſs of Blood, it appeareth firſt moſt commonly in the Head; for the Head will ſwell, and the Eyes wax great, and run with water, and froth at the Mouth, which are certain ſigns that the Beaſt is paſt Remedy; for he will not eat after he hath fallen ſick. The beſt way is to tye him, and to make a deep pit hard by the place where he dyeth, and ſo to caſt him in, and cover him cloſe with Earth, that no Dogs may come to the Carrion. For as many beaſts as ſmell of that Carrion, are very likely to be infected. And then let him take the ſkin, and carry it to the Tanners, and ſell it. It hath been a common charitable Cuſtom, to take the bare head of the ſame beaſt, and put it upon a long Pole, and ſet it on a Hedge faſt bound to a ſtake by the High-way ſide, that every man that rideth or goeth by that way, may ſee and know by that ſign, that there is ſickneſs of

Cattel in that Townſhip. And the good honeſt Husbandmen in thoſe parts are of opinion, that this may be a means that the Murrain may the ſooner ceaſe: when the beaſt is flay'd, the Murrain will appear betwixt the fleſh and the skin, and it will riſe up like a Jelly or Froth an inch deep or more; and the beſt Remedy for the Murrain, is to take a ſmall Curtain-rod, and bind it hard about the Beaſts Neck, and that will cauſe the blood to come into the Neck; and on the other ſide of the Neck, there is a Vein that a man may feel with his finger, then let him take a Blood-Iron, and ſet it ſtraight upon the Vein, and blood him on both ſides, and let him bleed the quantity of a pint, or nigh it, and then let him take away the Cord, and it will ſtanch bleeding. And thus let him ſerve all his Cattel in that Cloſe or Paſture, and by Gods Bleſſing there ſhall no more of them be ſick.

Of the Long-ſaught, with the Remedy.

THis ſickneſs will endure long, it is perceived by its hoiſſing, the Beaſt will ſtand much, and eat but little, and grow very hollow and thin, and he will hoiſt twenty times in an hour, but few ſuch do mend. The beſt Remedy is to keep the Cattel in ſundry places, and as many as were in company with that Beaſt

Beast that first fell sick, to let them blood a little. There are many Farriers that can sever them, that is, to cut the Dew-lap before; there is a Grass called Fetter-grass, take that Grass, and bruise it a little in a Mortar, and put thereof as much as a Hens Egg into the same Dew-lap, and be careful that it fall not out.

Of Dewholm, and the hard Remedy thereof.

THis Disease comes when a hungry Beast is put into a Pasture full of rank Grass, where he will eat so much, that his sides will stand as high as his Back-bone, and at other times the one side more then the other. When the beast hath this disease with the swelling, he must not be driven hastily nor laboured. The substance of this distemper is but a wind, and therefore he should be softly driven, but not suffered to lye down. I have seen a Farrier take a Knife, and thrust the beast thorow the skin and the flesh two inches deep or more, six inches or more thorow the Rigge-bone, that the wind may come out; for the wind lyeth betwixt the flesh and the great Paunch.

Of the Ryfen upon, and the Remedy thereof.

FEw or no men know from whence this Disease proceedeth; but you may perceive

ceive it by ſwelling in the Head, and more eſpecially by the Eyes; for they will run on water, and cloſe the beaſts ſight, which many times cauſes them to dye within an hour or two, if they are not ſuddenly taken in hand. The cauſe of this diſeaſe is, that there is a Bliſter riſen under the Tongue, the which Bliſter muſt be ſlit with a Knife acroſs: when he hath pulled out the Tongue, let him rub the Bliſter well with Salt, and take a Hens Egg, and break it in the beaſts mouth, ſhell and all, and caſt Salt with it, and hold up the beaſts head, that all may be ſwallowed down into the body. But the breaking of the Bliſter is the great help; let him drive the beaſt a little about, and this ſhall cure him by the help of God.

Of the Turn, and the Remedy thereof.

THere are beaſts that will turn about when they eat their meat, and will not feed: 'tis a dangerous diſeaſe for them, by reaſon that they are ſubject to fall in Pits, Ditches, or Waters. The cauſe of this diſtemper proceeds from a Bladder in the Forehead, between the Brain-pan and the Brains, the which muſt be taken out, or elſe the beaſt ſhall never mend, but it will kill him. This is the Remedy and the greateſt Cure that can be on a beaſt: Take the beaſt, and throw him down,

down, and bind his four feet together; and with his Thumb let him thrust the Beast in the Forehead, and where he finds the softest place, there let him take a Knife, and cut the skin three or four inches on both sides between the Horns, and as much beneath towards the Nole, and flay it, and turn it up and down, and pin it fast with a pin. And with a Knife cut the Brain-pan two inches broad, and three inches long; but let him look that the Knife go no deeper then the thickness of the bone, for perishing of the Brain: Let him take away the bone, and then he shall see a Bladder full of water two inches long and more. Let him take that out, and be sure that he hurt not the Brain; and then let him lay down the skin, and sew it fast as it was before, and bind a cloth two or threefold upon his Forehead, to keep it from cold and wet, for ten or twelve days together; thus have I seen many cured. But if the Beast be fat, and have good substantial meat upon him, it will be safer to kill him, for there will be but little loss. If the Bladder be under the Horn, it is past cure. A Sheep will be troubled with the same distemper; but I never saw any of them cured.

Of the Warry-breed, and the Remedy.

THere are Beasts that have this Disease in divers parts of their Body and Legs:

This is the Remedy; caſt the beaſt down, and bind his four feet together, and let the Farrier take a Gulter or pair of Tongs, or ſuch other Iron, and make it glowing hot; and if it be a long Warry-bread, let him ſear it cloſe to the body; and if it be in the beginning, and but flat, then let him lay the hot Iron upon it, and ſear it to the bare skin, and it will prove a perfect Cure.

Of the Foul, and the Remedy.

This Diſeaſe is for the moſt part between the Clees, ſometimes before, and ſometimes behind; it will ſmell, and cauſe the Beaſt to halt. This is the Remedy; caſt him down, and bind his four feet together, and take a Rope hard writhen and twiſted together, and put it between his Clees, and let him draw the Rope to and fro for a good ſpace, till that he bleed well, and then let him lay to it ſoft made Tar, and bind a cloth about it, that no Mire or Gravel get between the Clees, then put him into paſture, or let him ſtand ſtill in the Houſe, and he will ſuddenly mend.

Of the Gout without Remedy.

There are Beaſts that will have the Gout, and that for the moſt part in the hinder-

feet, which will cauſe him to go ſtifly and halt. I never knew any man that could find ſuch a Remedy as to cure this diſtemper: the only way to be taken that I know of, is to put him into good Graſs, and let him feed well.

To help a Beaſt that piſſeth Blood.

Take of Bloodwort, of Shepherds-purſe, or Knotgraſs, of each a like quantity, and ſtamp them together, then ſtrain them with a quart of Milk of one coloured Cow, and put thereinto a little Runnet made of the ſame Milk, and mix therewith the Leaven of brown Bread; then ſtrain them all together, and give it with a Horn: uſe this morning and evening, and it will cure him.

A Remedy for the Blain in the Tongue.

IT is a certain Bladder growing above the Root of the Tongue againſt the Pipe, which grief at length with ſwelling, will choak and ſtop the wind: You may perceive this diſtemper by his gaping, and holding forth of his Tongue, and foaming at the mouth; without a ſpeedy Remedy, it will ſuddenly kill him. The Cure is, to caſt him, and to take forth his Tongue, and ſlit the Bladder, or break it thereon; then waſh it with a little Vinegar and Salt, and he will recover.

To help a Beaſt that is goared.

Take Aſhes finely ſifted, and mix them with the grounds of Ale and Beer, and make it as thick as Butter, and ſo lay it thereon, and it will heal it.

A Remedy for the Pantaſie in a Beaſt.

THis Diſeaſe will ſhake him much, and make him quiver in the Flanks, and pant extreamly. For the Cure, you ſhall give him ſome Runnet, Soot, and Chamber-lye mixed together.

To kill Lice and Ticks in Cattel.

Take the Decoction of wild Olives mixed with Soot, then rub and chafe the beaſt all over therewith. Another: Take Bearfoot-herb, ſtamp it, and then ſtrain it with Vinegar mixt with it, and ſo apply it.

A ſovereign Remedy for the Plague in Cattel.

THis Diſeaſe proceeds from an infection of blood: it appears firſt commonly in the Head; for the beaſts Head will ſwell, and his Eyes grow great, and run with water. When he doth once froth at the mouth, he is paſt Remedy. For the Cure, take of the wild Carrot, called in Latine *Daucus* or wild Parſnep, of Groundſil, of Angelica-roots, or the Root

of Sea-Holm, named Eringion, with Fennel-ſeed, and ſprinkle it with ſod Wine, and fine wheaten Meal, with hot Water, mix them ſo together, and give your ſick Cattel to drink thereof: then ſoon after you ſhall make a Drink of Caſſia-Mirrh, and Frankincenſe, in like manner mixt with as much blood of the Sea-Tortoiſe, if you can get it; then put altogether in a quart of good old Wine, and ſquirt it into their Noſtrils. You muſt adminiſter this Medicine three days together, every day a third part. Other Preſervatives are theſe: You muſt change their Lays, and divide them into many parts, far off from thence, and alſo ſeparate the whole from the ſick; for one beaſt infected will infect all the reſt in a ſhort time: Thus when you have changed them into other parts, you muſt put them where you may be ſure that no other beaſt do feed with them.

An approved Remedy for the Tetter in Cattel.

THis Diſtemper is an ill-favoured Scurf or Scab growing on the skin or outward part of the beaſt. Some Tetters are broad, and ſome will grow long, and hang like a Cluſter of Grapes, ſomewhat hard. It is ſuppoſed that they are increaſed through leanneſs and wet; or it may proceed from ſome

venomed Humour, or by ſome prick or bruiſe. The running or broad Tetter is cured by ſearing it round about with a hot Iron, then lay Tar on it, and it will take it away. Some alſo ſay, that when the beaſt begins to be in good caſe, and luſty with eating of graſs, that it will wear away of it ſelf by degrees; for he hath it for the moſt part in the Winter, and not in the Summer.

An excellent Cure for an Ox or Cow that hath a Fever.

THis Diſeaſe is ſometimes got by cold or other diſtempers: The ſigns thereof are, when his Eyes are hollow, and ſeem as if they were heavy, dropping from his head, his mouth lathering and foaming, drawing his breath very long and hard, with much pain, which occaſions him ſometimes to ſigh. For the Cure, you muſt keep him a day and a night without meat or drink, then the next morning faſting you may draw a little blood from him under his Tayl; about an Hour after give him thirty ſmall Truncheons of Cole-worts ſod in Sallet-Oyl and ſalt-Fiſh-water, or Brine, and force him to ſwallow it. Do thus to him for five mornings faſting; caſt before him the tender branches of Olive-trees, or the tender buds of the Vine; rub and cleanſe

cleanse his Lips thrice a day, and give him cold water to drink, and keep him up till he be well. The Ox also is troubled with this disease, which proceeds from his too much labour. You must let him blood on the Vein of the Forehead, or on the Vein of his Ear. Then give him green Herbs, as Lettice, and such like, that are cold, bathe all his body with white Wine, give him cold water to drink, and he will recover.

An excellent Remedy for the Lungs of Cattel infected.

THe Cure is, you must pierce one of his Ears with a little Bodkin, and being so pierced, put into the holes the burnt Roots of Hazel-trees, then take a quantity of the Juyce of Leeks, with so much Sallet-Oyl, and mix it with a pint and an half of Wine, and give it him fasting. Use this nine days together, and he shall recover. This distemper proceeds from the Lights and Lungs of a beast infected, which will cause him to grow lean, till at length a common Cough will so dry his body, that it will kill him, if a sudden Remedy be not applyed.

To help an Ox or any other Beast that have lost their Quide.

THe Quide by some accident or other may fall from the beast, which will cause him to mourn, and have no stomach to eat; for that the meat which he hath already eaten, he cannot digest. To cure this distemper, take part of the Quide out of another beasts mouth, and give it to the sick beast to swallow down, and by that means he will recover: But if he hath been long distempered, that he is much wasted and spent, then you must pull forth his Tongue, and prick the under-vein with an Awle in two or three places, till it bleed: this will cure him. *Probatum est.*

A Remedy that fails not to cure a Beast that cannot piss.

Take and bruise Carduus Benedictus steeped in white Wine, and so give it to him. Give an Ox that cannot piss warm Water mixed with Bran; also take and stamp Sow-thistle, and heat it with Ale and Beer, and it will help him.

To cure a Cow of the Whethered.

THis distemper falls upon her when she hath but newly calved, and hath not cast her

her cleaning, which without voiding will ſuddenly kill her. To cure her, take a good quantity of the Juyce of Mallows, mixed with Ale and white Wine, which is excellently good to repulſe the latter birth after the Cow hath calved.

A Remedy for the faintneſs of a labouring Ox.

That Ox that hath laboured hard all the Winter at Plough, and at the approach of the Spring will be very lean and faint, and louſie, inſomuch that with little or no labour they will lye down. To recover and make him luſty, before his watering you muſt give him a good handful of Barley in the ſtraw, and afterwards let him drink: which will preſerve him in a ſtrong and good caſe.

To recover the Leanneſs of a Cow.

You muſt make a Drink, and give it her faſting, which is: take of long Pepper, of Madder, of the Bark of Walnut-tree, and Turmerick, with ſome Bays, of each a like portion: beat them into fine powders, and put them into a pint of Ale luke-warm, and ſhe will be in a good liking, and far better plight.

Remedies againſt the Worms in Cattel.

Take and ſtamp Garlick, and mix it with Milk or Ale, and give it to the beaſt. Take a handful of Wood-Sage or wild Sage, bruiſe

it,

it, and ſtrain it with Ale, and give it: They are approved Medicines.

Againſt the Milting of an Ox, or any other Beaſt.

This diſtemper is ſo called from the beaſts ſudden lying down, if there be but the leaſt ſtop, though at Plough or Cart, which for the moſt part may proceed from ſome blow, ſtripe, or other miſchance. When the beaſt lyes down, do not diſturb him, ſo as immediately to raiſe him; but gently turn him, and lay him on the other ſide, and he will by degrees recover himſelf: For the Remedy, bruiſe the Bark of an Aſh, ſtrain it with Ale, and ſo give it him, and he will do well.

An excellent Remedy for the dropping Noſtrils and watery Eyes of Cattel.

Take Salt and Savory mixed together, and rub his Throat with it, as alſo his Jaws; alſo you may rub and chafe the ſaid parts with Brine and Garlick mixed together, or ſquirt in his Noſtrils the Juyce of Pimpernel mixed with a little white Wine: Theſe things are excellently good for the dropping Noſtrils and watery Eyes of Cattel.

To cure the Garget in the Maw.

This dangerous diſtemper proceeds from the beaſts over-eating of Crabs or Acorns that they find under Trees, which for the moſt part they ſwallow whole without breaking or chew-

chewing, ſo that they lye ſo in lumps in the Maw, that they cannot digeſt it, ſo that in time it will grow and ſprout in the Maw (as ſome fancy) till it brings them into a dying condition. The Cure is, take a good quantity of whole Muſtard-ſeed, and mix it with Wine and ſtrong Ale, and give it to the beaſt, and it will ſet him right.

A Remedy againſt the crying and fretting of the Guts in Cattel, by ſome called, the Crowling.

The Cure is, when the beaſt ſhall ſuddenly ſee any thing ſwim, eſpecially (as ſome will have it) a Drake on the water, that he ſhall preſently be cured.

To cure Impoſtumes in Beaſts.

Open the place with an Iron, and when it is cut, then you may cruſh out all the evil humour and matter in it, then ſtir and waſh it with the warm Brine of an Ox. Afterwards take Oſirpi (ſo named of the French) mixed with Tar and white Oyl of Olive, plaiſter-wiſe cloſe the ſore therewith: If you cannot waſh the ſore clean inwardly, you muſt melt the Tallow of an Ox or Goat, and ſo infuſe it into the wound, and let it run down all about the bottom thereof. *Probatum eſt.*

To cure a Beaſt that is goared.

If it be by ſome of his fellow-cattel, to prevent ſome Gargel or ſome Impoſtume that may

may proceed from it, you muſt take Aſhes finely ſifted, mix them with the grounds of Ale or Beer, and make them as thick as Butter, and ſo lay it on the Goar, and this will certainly cure it.

The beſt times to be obſerved to ſtop Laxes.

You muſt obſerve when the Moon, or ſign of *Taurus* is in *Virgo* or *Capricorn*, that will be the beſt time for to give your beaſt drink to ſtop it. Alſo it is not good to purge, or to let blood (without a great neceſſity) in the change of the Moon, nor when there is an evil Aſpect in one Planet to another, nor in the ſigns of *Capricorn* or *Aquarius*; for they are the two Houſes of *Saturn* and *Mars*.

A ſudden and approved Remedy againſt a Sprain or Stroke.

Take Butter, black Sope, and Hemlock-herb, with a quantity of Salt and Oyl proportionable, then mix them altogether, bathe the Sprain and Stroke therewith, as hot as he can endure it, and it will cure him. But if it be in the Legs, you muſt put unto them the things aforeſaid, either with grounds of Beer or Ale, waſh them therewith, and then wrap it about them with a hair-rope dipt in Chamber-lye, and the beaſt ſhall do well.

To cure Calves that have the Worms in their Bellies.

Theſe Worms will annoy them much, and

at

at length prove dangerous; they will take away their ſtomachs to their meat. The beſt Remedy is to take Lumpin-peaſe half raw, bruiſe them, and divide them into ſmall pieces, make them to ſwallow them: do this in the morning, and it will kill them.

An approved Remedy for the Coſtiveneſs in Cattel.

A Swelling in Ox and Kine is procured through heat, ſo that they cannot dung. The Cure is to chaſe and drive them apace up and down: If they do not then dung, anoint your hand with Oyl or Greaſe, then rake them, and take forth their dung.

An excellent Cure for a Beaſt that is Hide-bound.

This diſeaſe happens to an Ox when he hath been over-laboured. For this Cure, ſethe Bay-leaves in Ale, and ſo bathe him therewith, and immediately chaſe and rub him with Oyl and Wine mixed together, and ſo pluck and draw the skin on both his ſides, till you have by degrees looſed it from his Ribs: do this in a Sun-ſhiny-day, that it may the better dry and ſoak it.

An excellent Cure for the Garget in the throat of a Beaſt

This diſtemper will grievouſly afflict him; it commonly ſeizes on him through ſome great drought for want of water. The Cure is, you

muſt caſt him, then cut and flay his skin on both ſides, as far as any ſwelling doth appear, then take the whiteſt ſifted Aſhes that you can procure, and mix them with the grounds of Stale and Piſs, and ſtir them well together, and waſh the fleſh ſore therewith, and it will heal it.

A certain Remedy againſt the Worm in a Beaſts tayl.

This Worm will breed like to an eating Canker, which will make the beaſt of ill liking, very poor in fleſh: when you offer to feel, you ſhall find this place ſomewhat ſoft; a little above the place on the ſides of his Tayl, you muſt ſlit the skin down-right with a ſharp Knife, two inches long; then take a quantity of bruiſed Garlick and Salt mixed together, bind it faſt to the place, and let it ſo remain till it do fall off it ſelf, and the beaſt will do well.

An approved Remedy to cure Galls and Scabs in Cattel.

Take Garlick, and bruiſe it, and with it chafe and rub all the Sores. If it grow to any great Sore, then rub the place with bruiſed Mallows mixed with white Wine, and bind them to the place.

A Remedy for the Galling of the Neck or Throat with the Yoke.

If it ſwell but of one ſide, you muſt let him blood

blood on the Ear on that side; but if it be chafed in the midst of the Neck, then let him blood in both his Ears, and lay unto it a Plaister made with the Marrow of an Ox, mixed with the Suet of a Buck, and then melt them together with some Pitch and Tar, and you shall heal him.

A Cure for the Itch in Cattel.

It may proceed from bad dressing, he may take it from his Fellows, or it may come from ill water, and Choler in the Veins. The Remedy is to wash and chafe him with his own Urine made warm, and mixt with old salt Butter.

A Cure for the flowing of the Gall.

This distemper proceeds from the abundance of Choler, increased by hard travelling in hot seasons; the Gall being filled with Choler, it overflows the whole body, causing the Yellows or the Jaundice. For the Cure, take Gallwort herb, which is bitter, and stamp a handful thereof, and then strain it with a quart of Ale, and so give it the beast to drink three mornings, and he will recover.

An approved Remedy against the Colick in Cattel.

This distemper causeth a gurting or rumbling of the belly, with a noise in the Guts; you shall see the diseased beast lye down, and rise presently, because his pain will not suffer

him

him to take any eaſe or reſt. If it be an Ox, bruiſe Garlick, or bruiſed Leeks with a pint of Wine. The general Medicine to help Cattel, is to put into their drink the Oyl of Nuts, or Onions boiled in ſweet Wine.

An excellent Remedy againſt the Haw in the Eye.

This diſeaſe is ſoon perceived by the beaſts holding of his head on one ſide, and his winking with his Eye, which will run of water. The Cure is, you muſt hold him faſt by the head, with a ſtrong double thred, put therewith a Needle in the midſt of the upper Eye-lid, and tye it to the Horn, then take your Needle again with a long thred, and put it through the Griſtle of the Haw, and with a ſharp Knife cut the skin exactly round, and ſo pluck out the Haw; then lay a fine Linnen-cloth about the top of your finger, and put your finger inwardly round about his Eye, and take out the blood, then waſh it with Beer or Ale, and caſt in a good quantity of Salt, waſh it again, and ſtroke it down with your hand: Let him go, and he will do very well.

A Remedy for the Kibes in the Heel.

Cut them forth as nigh as you can, and let them bleed well; then take Herb-Grace, and the Yolk of a new-laid Egg well beaten and ſtampt, and ſo bind it to the grief, and it will help and heal it.

An excellent Remedy for the ſickneſs of the Lungs.

This diſeaſe is perceived by the riſing and ſhaking of the Dew-lap. For the Cure, take Bearfoot and beaten Garlick, wrap it in Butter, then cut his Dew-lap two inches beneath his ſticking place, open it round with your finger, or with a ſtick on both ſides and beneath, then put in your ſtuff: You muſt cut your Dew-lap four fingers above the bottom thereof; then muſt you tye a ſtrong thred to your ſtuff, to pluck it up and down as you ſhall ſee cauſe to every third day, and it will rot the ſooner. If the humour do not rot, then change your ſtuff, and put in new, and he ſhall do well.

Excellent Remedies for the Cough in Cattel.

This diſtemper proceeds from cold or over-travelling of the beaſt, or by eating of ſome unwholeſom thing. For the Cure, take Stitchwort chopt ſmall, with huſked Beans bruiſed together: you may alſo take of Lentil-peaſe cut out of their Huſks, bruiſe them ſmall, and mix them with three pints of warm Water, and give it him with a Horn. If an Ox hath but of late got a Cough, you may cure it by a drink made with water mixed with Barley-meal.

For the Navel-gall, with the Remedy.

THis diſtemper proceeds from a hurt with a Saddle, or with the Buckle of a Crupper, or from ſome other cauſe that hath hurt the midſt of the Back: The Cures whereof are divers, and ſo they ought to be; for Medicine is to be adminiſtred according to the hurt, as it may be more or leſs. If it be but only galled, take the Soot of a Chimney and Yeſt mixed together, and plaiſter it once or twice a day. Another Cure for it is, that if it be ſo hurt, that it ſwell, and is impoſtumed, then lance it on the nethermoſt part of the Ulcer, ſo that the matter may have iſſue downward; for if you ſhould lance it at the top, then the corruption that remaineth will fiſtulate: if you find the concavity deep, then make a Tent of Flax, and dip it in this Salve: Take of Deers Suet, of Wax, of Tar, and of Turpentine, of each three ounces, and one ounce of Roſin, mingle them together, and tent the Wound; and if you ſee any dead fleſh grow in it, then ſprinkle the powder of Verdigreaſe upon it; lay upon the head of the Tent the plaiſter of the Yolk of an Egg, Honey, and Wheat-flour, and thus dreſs it morning and evening, and it will quickly be whole.

Of

Of the Worms, with the Remedy.

THe Worms lye in the great Paunch of the Belly of the Horſe; they are engendred of raw and bad humours: There are three kinds of them; the Worm, the Bot, the Truncheon: ſome of them are of a ſhining colour, like a Snake, ſix inches in length, great in the midſt, and ſharp at both ends. The Horſe when he is troubled with them, will lye down and wallow, which is when they feed on him, his breath will ſtink, & his mouth be clammy. The preſent Remedy is to give him a quart of Milk, and half a pint of Honey in it blood-warm; this will keep them from gnawing of him, becauſe they will ſuck thereof until they are ready to burſt: then the next day give him this Drink. Take a quart of Wort, or Ale that is very ſtrong, then take a quarter of a pound of Fern, half a pound of Savin, half a pound of Stone-crop, ſtamp them, and mix them together with two ſpoonfuls of Brimſtone, and as much Chimney-ſoot, beaten to powder. Let them lye in ſteep two hours, then ſtrain them, and give the Horſe a little warm, bridle him, and let him ſtand ſix hours without meat, and queſtion not but your Horſe will be quiet and do well.

Of the Farcy, with the Remedy.

THis is a very bad diſeaſe, but may be cured, if it be taken in time; it will appear in divers parts of the body, where there will riſe Pimples, and as much as half a Walnut ſhell; they will follow a Vein, and will break of themſelves, and as many Horſes as do play with him that is ſore, and gnap off the matter that runneth out of the ſore, will have the ſame diſeaſe within a month after; and therefore let the Grafier keep his ſick Horſes from the whole. This diſtemper proceeds from an Ulcer which is not unknown to any that have for a long time been Maſters of Horſes, and yet unknown to all, I mean as to the true cauſe of this diſeaſe: Some ſay it is a corruption of the blood, ſome an outward hurt, as of Spur-galling, biting of Ticks, Hogs Lice, or ſuch like; ſome ſay an infirmity bred in the Breaſt near the Heart, in the Side-veſſels near the Stones, with many evil humours congealed together, which afterwards diſperſe themſelves into the Thighs, and ſometimes into the Head, and doth ſend forth watery humours into the Noſtrils, and then 'tis called the running Farcy. Indeed if the true cauſe of a diſeaſe be known, the diſeaſe it ſelf is eaſily cured. The Mange, the Leproſie, and

this

this diſeaſe of the Farcy, are moſt pernicious to a Horſe; for oftentimes it falleth out, that many Horſes infected therewith, though they live, and the diſeaſe ſeemeth to be healed, yet they are rendred of ſmall or of no uſe. For my own part, I conjecture the cauſe of this diſeaſe grows either from abundance of bad blood, or by a great diſtemper thereof, through a violent heat changed into a ſudden cold. To cure this diſtemper, firſt let him blood on both ſides of the Neck three quarters at leaſt; for it is moſt certain, that the Liver which is the fountain of blood, is corrupted, and ſo ſendeth the ſame into every part of the body, ſo as to become lothſom to behold: then give the Horſe this Drink. Take a Gallon of fair Water, put into it a good handful of Rue, and a good ſpoonful of Hemp-ſeed, and a handful of the inner Rind of green Elder, bruiſe them in a Mortar together, and let them ſetbe until they are half conſumed, and being cold, give it to him to drink; ſtill continue to let him blood a great quantity in that Vein which is nigheſt to the ſore place, as you ſee occaſion. Let his diet be thin, but very clean and ſweet, then take this following approved Medicine. Of Herb-Grace a handful, of Featherfew a handful, of Chickweed of the Houſe a handful, of Kikweed a handful, of Herb-Robert a handful, keep the reſidue there-

of in a Pipkin close covered with the Earth, stop the mouth thereof close with Herb-Grace and Dock-leaves, and a green Turfe laid upon it, no Air to come in, and every third day untye his Ears and dress it, and so continue till all the Farcy be dead; for undoubtedly at three or four dressings it will kill it.

Of a Court with the Remedy.

THis disease makes a Horse to halt very sore; it appeareth most upon the hinder-legs straight under the Cambrel place and a little beneath the Spaven: it will be swelled, and hard to cure, if it grow upon the Horse. The Cure is, take a pint of Wine-lees, a Porringer of Wheat-flour, of Cummin half an ounce, and stir them well together, which being warmed, charge the sore place therewith, renewing it once every day, for the space of three or four days; and when that the swelling is almost gone, then let them draw it with a hot Iron, and cover the burning with Pitch and Rosin melted together, and laid on warm, clap on a Flocks of his own Collar, and let him rest, and come in no water for the space of twelve days. Another for the same: Take an Iron, and make it red hot, and hold it against the sore as nigh as you may, but touch not the sore, and when it is warm, then take

a

a Fleam, and wet it in six or seven places full of Nervil, then take a handful of Salt, and a penny weight of Verdigreale, and the white of an Egg, and put all these together, and take a little Flax, and wet it therein, and lay it to the sore.

Of Wind-galls in Horses, with the Remedy.

Wind-galls are a disease which proceeds from too much labour; they appear above the Fet-locks, as well before as behind; they consist of a little swelling with Wind. This is a Grief many are acquainted withal. The Cure is, wash the places with warm water, and shave the hair, then draw it with a hot Iron, in this manner; that done, lay the middle Line which passeth down-right through the Wind-gall with a sharp Knife, beginning beneath, and so upwards half an inch, thrust the Jelly out, then take Pitch and Rosin molten together laid on hot, with Flocks upon it.

Of the Pains and Cratches of a Horse, with the Remedy.

This disease causeth a Horse to halt; it proceeds chiefly from ill keeping: it appears in the pasterns, as if the skin were cut

over-thwart, that a man may lay in a Wheat-straw. This distemper proceeds from a fretful waterish matter bred in the pasterns of the hinder Legs, liquid and thin humours resorting to the joynts, whereby the Legs will be swollen, hot, and scabby. The Cure is to wash the pasterns with Beer and Butter, which being dry, clip away all the hair, saving the Fetlock; then take of Turpentine, Hogs-grease, and Honey, of all a like quantity, mingle them in a Pot, and put into them a little Salt of Armony, the Yolks of two Eggs, and as much Wheat-flour as will thicken them, then warm a little lay it on a cloth, make it fast to go round the pastern, and bind it fast, renewing it every day. Let him not come into any wet, but stand still: some will wash it only with Gun-powder and Vinegar, which cannot but serve very well to the purpose.

Of the Ringbone, a Disease in Horses, with the Remedy.

THis is a dangerous disease; it appears before on the foot above the Hoof, as also behind: it gets into a Gristle growing about the Crouns of the feet; it will swell three inches broad, and a quarter of an inch or more of height, the hair of the beast will stare and wax thin, it will make him halt; it is hard

to

to cure, if it be of any long growth. The Cure is to fire the ſore with right lines from the Paſtern to the Coffin of the Hoof, in this manner ||||. and let the edge of the drawing Iron be as thick as the back of a big Knife, burn it ſo deep, that the skin may look yellow, then cover it with Pitch and Roſin molten together, and lay thereon Flocks of the Horſes collar; ſome will eat it away with Corroſives, as the Splent.

Of the Spaven, with the Remedy thereof.

IT is a very bad diſtemper, which will occaſion the Horſe to halt, and that more eſpecially in the beginning of it; it appeareth on the hinder Legs within and againſt the Joynt, it will be a little ſwelled and hard. Some Horſes have a thorow Spaven, as it appeareth both within and without: ſuch a kind of Spaven is hard to be cured. Our moſt expert Farriers will have a Spaven to be of two kinds, either dry or wet; this latter they call the Blood-Spaven. The dry Spaven is cured in the manner following. Firſt waſh it with warm water, and ſhave off the hair as far as the ſwelling is, then ſcarifie the place, that it bleed, take of Cantharides a dozen, and of Euphorbium half a ſpoonful, break them into a Powder, and boil them together, with a lit-

tle

tle Oyl de Bay, and when they are boiling hot, with feathers anoint the ſore, and tye his Tayl, ſo that he may not wipe it, and within an hour after ſet him in the Stable, and tye him ſo that he lye not down that night (for rubbing off the Medicine) and within a day after, anoint it with Butter, and ſo continue for ſix days; then draw the ſore place with an hot Iron, take a ſharp one like a Bodkin, ſomewhat bowing at the point, and ſo upward betwixt the skin and the fleſh, and thruſt it in the nether end of the middle Line, then tent it with Turpentine and Hogs-greaſe molten together, and made warm, renewing it once every day, for the ſpace of nine days; but remember that after this burning, you take up the Maſter-vein, which muſt be done in this manner: Caſt the Horſe upon ſome ſtraw, then having found the Vein, mark well that part of the skin that covereth it, and pull that aſide from the Vein with your left thumb, to the intent that you may ſlit it with a Razor without touching the Vein, and cut no deeper then through the skin, and that longeſt-wiſe that the Vein goeth, & not above an inch, then will the skin return again to the place over the Vein; with a Cornet under-cover the Vein, and make it bare, thruſt the Cornet underneath it, and raiſe it up, and put a Shomakers thred underneath ſomewhat higher then the

Cornet

Corner ſtanding, ſlit the Vein long-ways, that it may bleed, and having bled ſomewhat from above, then knit it with a ſure knot ſomewhat above the ſlit, ſuffering it to bleed only from beneath a great quantity; then knit up the Vein alſo beneath the ſlit with a ſure knot, then betwixt theſe two knots cut the Vein aſunder where it was ſlit, and fill the hole with Salt, then lay on this following Charge: Take half a pound of Pitch, a quarter of a pound of Roſin, a quarter of a pint of Tar, boil them together, and being warm, anoint all the inſide of the Joynt, and clap on the Flocks of the Horſes collar, and turn him to Graſs, if it may be till he be perfectly whole, and the hair grown again.

Of the wet or blood Spaven, with the Remedy.

SOme call this, as hath been ſaid, the Thorow Spaven; it is fed by a thin flexible humour by the Maſter-vein. The Cure is to ſhave off the hair, and to take up the Vein on every part, and then cut the Vein aſunder, and draw it with a hot Iron, charge it, and put on the Flocks, and it will perfectly heal it, as I have certainly experimented.

For any dangerous Bots or Maw-worms, the Remedy.

THis is a very evil distemper, the Bots lying for the most part in the Horses Maw, where they will remain an inch long, white-coloured, and red-headed, and as much as a fingers end; they will grow quick and stick fast on the Maw-sides. This disease appeareth by the stamping or trembling of the Horse; taken at the beginning, there are Remedies enow for them; but let alone too long, they will eat through the Horses Maw and kill him. For Cure, take as much Precipitate (which is Mercury calcined) as will lye gently upon a silver Two-pence, and lay it on a piece of sweet Butter almost as big as a Hens Egg, in the manner of a Pill, then chase him a little up and down, and afterwards set him up warm, making him fast for full two hours after, and it will kill all manner of Worms whatsoever; yet in the administration, you must be very careful; for in the Precipitate there is a strong poysonous quality, therefore mix the same prescribed quantity with a little sweet Butter, as much as a Hazel-nut: Before that you lap it up in the great lump of Butter, it will be the better to allay much of the evil quality. But this I leave to your own discretion, assuring you, that there is not any thing comparable to it for the same infirmity.

Of

Of the Serew or Serow, with the Remedy of it.

THis diſeaſe is like to the Splent, in manner of a Griſtle, but it is a little longer and more, about the bigneſs of an Almond; it groweth on the fore-leg, and lyeth upon the knee on the inner-ſide: Some Horſes have a Thorow-Serew on both ſides of the Legs, that Horſe muſt needs ſtumble and fall, and it will be very hard to cure him. The beſt Remedy is, to take an Onion and to cut out the Core, and put therein a ſpoonful of Honey, a quarter of a pound of unſlackt Lime, three penny worth of Verdigreaſe, and roaſt the Onion, and bruiſe it, and lay it to hot, having firſt cut the skin. *Probatum eſt.*

Of a Malender, with the Remedy.

THis is a diſeaſe that may be cured for a time, but with ill keeping it will come again; it appeareth on the foremoſt Leg on the bending of the knee behind: it is like a Scab or Scald growing in the form of lines or ſtreaks. Some Horſes will have two of them on a Leg within an inch together; they will make a Horſe to ſtumble, and ſometimes to fall. The Cure is, to waſh it with warm water, and to ſhave the Scab clean away, then take

take a ſpoonful of Sope, as much Lime, and make it into a Paſte, and ſpread as much on a clout as will cover the Sore, bind it faſt, renewing every day for three days together, then anoint the ſame with Oyl of Roſe, to cauſe the cruſt to fall away, then waſh it with Urine, and ſtrew upon it the powder of Oyſter ſhells. Another for the ſame: Take a barrelled Herring with a ſoft Row, and two ſpoonfuls of black Sope, half an ounce of Allum, and bruiſe them together, and lay it on the Sore three days.

Of the Splent, with the Remedy.

THis is the leaſt diſeaſe that is, except it be the Lampas, and many undertake to cure it, of which very few fail. The Cure of it is, to waſh it with warm water, and ſhave off the hair, and lightly to ſcarifie all the ſore places with the point of a Razor, ſo as that the blood may iſſue forth: then take of Cantharides half a ſpoonful, and of Euphorbium as much, beaten into a fine powder, and mingle them together with a ſpoonful of Oyl de Bay, and then melt them in a little Pan, ſtirring them well together, ſo that they may boil over; and being ſo boiled hot, take two or three feathers, and anoint all the ſore places therewith, and let not the Horſe remove from the

the place for two hours after. Afterwards carry him away, and tye him, ſo that he may not touch the Medicine with his lips, and alſo let him ſtand without Litter that day and night, and within two or three days after anoint the Sore with Butter for nine days, and it will cure him.

Of the Glanders, with the Remedy.

THe original cauſe of this diſeaſe is the Rheum, which being an abundant moiſture, and naturally very cold, at length congealeth according to the nature of cold, and then proceedeth to Kernels, and ſo to Inflammations, which become ſo great in the end, that they ſeem to ſtrangle the breath of the Horſe, from whence it is ſaid to have the Strangles, which by continuance of time either periſh the Liver or the Lungs, by a continual diſtilling of putrefied and corrupt matter: the ſigns are apparent to any man that hath any diſcerning, and the diverſity of Medicines infinite. The beginning always of this diſeaſe, is taking of cold, after too much heat, the which cannot be avoided from a Horſe that hath had too much feeding, and too great reſt, more eſpecially if his diet be naught; or by the uſe of continual Travel upon a full ſtomach, or before his body be made clean after long reſt; for the ſtanding Pool is ever muddy:

dy. The Cure is, you muſt take one ounce of Fennel Greek, boil it in Water till it ſplit and open in two, and after that mingle it with the Decoction, and two pound of Wheat-meal, and give it the Horſe to drink twice a day, keep him faſting. *Probatum eſt.*

An excellent Remedy for the Haw in the Eye.

THis diſeaſe in the Horſes Eye is like a Griſtle; the way to cure it, is to take up the Haw with a little Ivory Needle or Penknife, and then to cut it all away with your Siſſers; for the only way to cure it, is to cut it out.

Of the Barbes, Barbels, with the Remedy.

THey are little Paps in a Horſes mouth that hinder him from eating. The Cure is, to clip them away, and to waſh them in Vinegar and Salt.

Of the Vives, with the Remedy of it.

THis diſeaſe is in a Horſes Ear between the upper end and the Chall-bones & the Neck, it proceeds from the corruption of the blood: they are round knots between the skin and the fleſh, like Tennis-balls, and if they are not timely killed, they will grow quick, eat the roots of the Horſes Ears, and kill him. The Cure is, to draw them with a hot Iron right

down

down in the midſt, from the root of the Ear ſo far as the tip of the Ear will reach, being pulled down, and again under the root of the Ear, with a hot Iron draw two ſtreaks on each ſide, then in the midſt of the firſt line, lance them with a Lancelet or Razor, taking hold of the Kernels with a pair of Pinſers, ſo as that you may cut the Kernels out without hurting the Vein, then fill the hole full of Salt. Another Cure for the ſame: Take Agrimony, Honey, and Violet-leaves, ſtamp them together, and ſlit the Sinew under the Ear, and lay a Plaiſter thereunto for two or three days.

Of the Mourning Chine, with the Remedy.

THe cauſe hereof is great heat, and afterwards taking of cold; it firſt beginneth with a Rheum, which proceedeth to the Inflammation of the Liver and the Lungs, by the continual diſtilling upon them, then to the Glanders, which is the Impoſtumation thereof, and laſtly to an Exulceration, which abruptly and untruly is called the Mourning of the Chine: The ſigns to know this diſeaſe are theſe. 1. The continual diſtilling of Rheum in the Head. 2. The continual Knobs between the Jaws. 3. The keeping of the hair without caſting. 4. A continual running of a thick ſtinking matter at the Noſe, like Oak-

water. 5. The faſtning and growing of a Knob as big as a Walnut, to the inſide of one of the Jaws; which if ſo, commit the Horſes Carcaſs to the Crows, for he is paſt all help. The Cure for ſuch a Horſe, if he be not paſt Cure. For the firſt, which is the Rheum, the Cure is what I have mentioned for the Cold in the Head. For the ſecond Cure, I refer you to that of the Glanders. For the third, let him blood till you ſee that he have fine and pure blood, and give him good Maſhes. For the fourth, for the running of his Noſe, you may add ſome ordinary purging Drinks that are uſed for the purging of the Head. For the fifth, if you find no amendment but a knob grown to his Jaw, then you muſt give him a Purge with Pills; and if theſe means will not help him (though he were the beſt Horſe in the world) he is remedileſs.

Of the Broken Wind, with the Remedy.

THe cauſe of this dangerous diſeaſe, hath been but gueſſed at, not truly diſcovered by any, as not being well underſtood, & therefore accounted of moſt Horſe-men incurable. I do intend to uſe my beſt endeavours to unfold and explain it: to which purpoſe, I will divide the ſame into three kinds, every one of which may be truly termed a Broken Wind, becauſe

becauſe the breath being drawn very ſhort and thick, contrary to the original Inſtitution or Creation, the which is long, cold, and quiet, for ſo every Creature is by Nature; but when any accident of violence of the body is uſed in any of them to a diſtemper, the ſigns thereof will quickly be viſible, and then every mans experience telleth him evidently, that he panteth and fetcheth breath very ſhort and thick; I therefore will begin with the Cauſe thereof, the which rightly underſtood, the Effects cannot be hid. Now the cauſes why a Horſe draws his breath very ſhort, are theſe; as ſickneſs, great fulneſs, violent exerciſe: but the reaſon of the cauſe is, for that the Heart being the only hotteſt part of the body, from whence the Arteries and Veins do carry the heat thereof to every part of the body (and therefore it is truly ſaid to be the Chariot of Life) when the ſame by ſickneſs, or violence of exerciſe is choaked, or as it were ſmothered with too great heat, then do the Lights, being the Bellows to draw breath, according to that Office that Nature ordained them unto, preſently labour with all violence to draw it, and cool and comfort the Heart, and ſo conſequently all the members and parts of the body, to fill all the empty corners with Air, which naturally and in predominant qualities is moiſt; and when they have drawn ſufficient breath,

the drineſs and heat by the moiſtneſs of the Air is quenched, which being ſo, then doth the Creature draw breath leiſurely and coldly, and not before: but ſo long as the Heart is oppreſſed by the violent heat of ſickneſs, or by great fulneſs, or violent exerciſe, the Caves, Pipes, and paſſages for the breath, are almoſt ſtopped and choaked up; then do the Lungs labour extream thick to preſerve the life of the Creature, which is the Heart, and therefore it is ſaid to be the firſt thing that liveth, and the laſt that dyeth: So that all things which hinder and ſtop the paſſages of the breath, breaking the natural courſe thereof, are the only cauſes of a Broken Wind. So likewiſe the Cure of the Broken Wind muſt be by removing of the ſtoppings of the Air, and then the Lungs will perfectly perform their Office, and the Creature will be freed from the diſeaſe. The differences of Broken Winds both in cauſe and effect, are divers, and yet may be termed Broken; namely, the ſhortneſs of breath, the Purſick, and Broken-winded.

1. As touching the ſhortneſs of breath, it may proceed from ſome groſs and tough humours, cleaving to the hollow places of the Lungs, ſtopping the Wind-pipes, ſo that the Horſe cannot eaſily draw his breath; and the ſign thereof is his coughing often, daily, and vehemently, without voiding at the Noſe or the Mouth.

Mouth. 2. It may come by haſty running after drinking, or upon a full ſtomach, or diſſolution of humours, deſcending into his Throat or Lungs, by reaſon of ſome violent heat diſſolving the ſame. And the ſigns thereof are, continually panting, ſending the ſame forth very hot at his Noſe, in a wheaſing manner, his Flanks beating ſo thick, that he cannot fetch breath, but by holding his Neck right-out and ſtraight: and this may be truly called a Broken Wind. The Cure is, to take a cloſe earthen Pot, and put thereinto three pints of ſtrong Wine-Vinegar, and ſome new-laid Eggs, with the ſhells unbroken, and four Garlick-heads, clean peeled and bruiſed; then cover the Pot cloſe, and ſet it in ſome warm Dunghil, and there let it ſtand a whole night, and the next morning take out the Eggs, but break them not, then ſtrain the Garlick and Vinegar through a clean cloth, put thereunto a quarter of Honey, half a quarter of Sugar-candy, two ounces of Liquoriſh, two ounces of Aniſeeds beaten into a fine powder. The Horſe having faſted all night, in the morning open his mouth, and put out his Tongue, and put one Egg into his Throat, and then let go his Tongue, ſo that he may ſwallow it down, then pour after it a Horn of the ſaid Drink, being luke-warm, and ſo all the Eggs in that manner, and all the Drink being ſpent, bridle

him, and ſtop him, and cloath him very warm, and let him ſtand four hours, then unbit him; and if it be in Winter, give him Wheat-ſtraw but no Hay; and if in the Summer time, give him Graſs, and for ſome days together Maſhes to drink, with ſome Sallet-Oyl or Hogs greaſe in them, and the Horſe will do well, and in few days be fit for Exerciſe.

Of the Gravelling of the Horſe, with the Remedy.

IT is a hurt will make the Horſe to halt; it proceeds from Gravel and little ſtones that get in between the Slough and the Heart of the Foot: The Cure is, to pare his Hoof, and get out the Gravel, and then ſtop him with Turpentine and Hogs-greaſe molten hot, and ſtopt with Tow: have a care that he come not out of the Stable till he be well.

Of the Lampas, with the Remedy.

THis diſeaſe is in the Mouth; it is the eaſieſt to be cured of all thoſe that diſturb the Horſe: as it is only but a thick skin full of blood that hangs over his Teeth, that he cannot eat; ſo there needs no more to be done, but to let out the blood, and then take away the skin, and the Horſe will be cured.

Of

Of the Accloyed, or Cloying the Foot with the prick of a Nail, with the Remedy.

IT is a hurt that cometh from ill ſhoeing, when a Smith drives a Nail into the quick, the which will make the Horſe to halt: The Cure is, to take Turpentine, Wax, and Sheeps Suet molten together, and poured into it.

Of the Colts Evil, with the Remedy.

THis is a very bad diſeaſe, which proceedeth from the rankneſs of water and blood: it appeareth in his Scote, for they will ſwell great, and will not be hard. This diſtemper taken at the firſt, is thus cured; waſh the Sheath clean with luke-warm Vinegar, draw out his Yard, and waſh it alſo, then ride him to ſome running ſtream up to the belly, to allay the heat: do this luſtily for a quarter of an hour, and ſo after for three or four days, and it will cure him.

Of the Pains in the Head, with the Remedy.

THis is an evil diſtemper that befals the Head. The Cure is: Take a pint of Malmſey, five new-laid Eggs, a head of bruiſed Garlick, ſmall Pepper, Cinnamon, and Nutmegs beaten fine; give it him to drink three days together, and let him faſt ſix hours after.

Of a Horſe that ſtumbleth, which is called the Cordes, with the Remedy.

THis diſtemper appeareth in the further Legs of the Body of the Horſe; it is called the Cordes, becauſe the Corde is a Sinew that breedeth amongſt the Sinews, the one end cometh down towards the Shackle-vein, and ſo up through the Leg, and goeth over the inward ſide of the Knee, and ſo over the Shoulder, and ſo along the Neck by the Weaſant, and it goeth over the Temples under his Eye, and down over the Snout, betwixt both the Noſtrils and the Griſtle, there knit the length of an Almond. The Remedy is, to take a ſharp Knife, and cut a ſlit even at the top of his Noſe juſt with the point of the Griſtles, open the ſlit, and you ſhall perceive a white ſtring, take it up with a Boars Tooth, or a Bucks Horn, that is crooked, or ſome Bodkin made ſo, and twine it about the ſtrait, and cut it aſunder; you may twine it ſo much, as that you may rear his foot from the ground, then ſtitch up the ſlit, and anoint it with Butter, and the Horſe will undoubtedly be cured.

Of the Morefound, with the Remedy.

THis is an evil diſeaſe, which proceeds from riding faſt till the Horſe ſweat, and then

then being ſet up preſently in a cold place without Litter that he takes cold on his feet, and that more eſpecially before that it appeareth in the hole under the heart of the foot, for it will grow down, wax white, and cromly like a Pumice; and alſo will appear in proceſs of time on the wrinkling of the Hoof, and the Hoof before will be thicker and more brittle, then if he had not been moreſound: nor will he tread ſo boldly upon the hard ſtones as he did before. The Remedy is, paring and good ſhooing, which being carefully done, he will do good ſervice.

Of the Enterfere, with the Remedy.

THis diſtemper proceeds from the ill ſhooing of the Horſe; it appeareth oftentimes both behind and before, between the feet againſt the Fetlocks. There is no other Remedy for it but good ſhooing.

Of the Scelander, with the appointed Remedy.

THis diſtemper is in the bending of the Leg before; it is ſomewhat like a Malander, and may be cured in the ſame manner.

Of the Scab, with the Remedies.

THere is a diſeaſe amongſt Horſes, which is called the Scab; it is a Scurfe in divers parts of

of the body; it chiefly proceedeth from leanneſs and ill keeping. It is commonly amongſt Horſes. There is a filthy ſtinking Scab, which is called the Crown Scab, growing about the Coronets of the Horns: the hair will ſtare like Hogs briſtles, and be always mattering. When the hair is ſhaven away, you are to take a little Frankincenſe, Nitre, Tartar, and the Bark of Aſh, Vitriol, Verdigreaſe, and Hellebore white and black, round Birthwort, and ſtamp them together with Yolks of Eggs and ordinary Ale, then after that boil them, and anoint the ſore place. This Oyntment will alſo ſerve for the Scab and the ſore Crupper.

A Remedy for cut and bruiſed Sinews.

Take of Tar and Bean flour, and Oyl of Roſes, and lay it hot to the place: of the ſame effect are Worms and Sallet Oyl fryed together: to the ſame purpoſe alſo ſerves the Oyntment of Worms, which you may have at the Apothecaries.

For a Horſe that cannot piſs.

Take a pint of white Wine Vinegar, half a pound of Simgreen, bruiſe it ſmall, and wring out the Juyce, take a handful of Fennel, and a handful of Fox-Gloves, the Leaves of the Flowers, two ounces of Gromwel-ſeed, and half a pint of ſweet Honey, ſtamp them well together, and ſtrain them into Vinegar. Let him ſtand without meat and drink 24 hours.

Probatum eſt. To

To bring Hair again.

Take the Dung of Goats, and ſome Honey and Allum, and the Blood of a Hog, boil them together, and being hot, rub the place therewith.

For the Stone and Colick in a Horſe, the Remedy.

Take a pint of white Wine, half a pint of Bur-ſeed, and beat them ſmall, two ounces of Parſley-ſeed, half a handful of Hop, half a handful of unſet Leeks, and half a handful of Water-creſſes, half an ounce of black Sope, and mingle them together, ſtamp and ſtrain them, but put the Bur-ſeed and Parſley-ſeed together to it after it is ſtrained, and then warm it, and give it him to drink.

Of a preſent Remedy to kill the Fire either in Burning or Shot.

Take Varniſh, or Oyl and Water beaten together, and anoint the place with a feather.

To ripen an Impoſtume.

Take Mallow-roots and Lilly-roots, and bruiſe them and put them into Hogs Greaſe, and Linſeed-meal, plaiſter-wiſe, lay it to.

For a Wrench in the Fetlocks, or any other Joynt that is ſuddenly done.

Take of Narvil, and black Sope, and boil them together a little on the fire, and anoint with it,

For

For the dangerous Galling of a Horſe, an excellent Remedy.

Take a pottle of Verjuice, two penny worth of green Coperas, boil it in a pint and a half, and waſh and ſearch the hole therewith, and fill it with red Lead, and let it remain three days untouched, then waſh it with the ſame, and fill it again with red Lead. This will heal it, though it be galled to the body.

Of Warts in general, and of the ſpongy Wart, with the Remedy.

THere is a diſtemper that ſome Horſe-men will neither allow to be either a diſeaſe or hurt, and that is, if a Horſe want Warts behind, beneath the ſpaven place; for then he is no Chapmans Ware, if he be wild: but if he be tame, and have been ridden upon, then *caveat Emptor*: Let the Buyer beware that he hath both his eyes to ſee, and his hands to handle; there is a Saying, That ſuch a Horſe ſhould dye ſuddenly when he hath lived as many years as the Moon was days old, or ſuch time as he was foaled. But to paſs over this light digreſſion, there is a Wart which is called Spongy. The Cure is, if it be long enough, to tye a thred about it, and it will eat off, or elſe to take it off with a hot Iron.

To help the Surbaiting or Soreneſs of a Horſes Feet.

WHen you find your Horſe to be ſurbaited, preſently clap on each of his fore-feet two new-laid Eggs, and cruſh them therein, then upon the top of them lay good Cow-dung: Thus ſtop him for four hours, and he will recover.

For a Wrench or Strain in the Paſtern.

Take a quart of Brine, and ſethe it till it be ready to boil over, and then ſtrain it, and put into it a handful of Tanſie, a handful of Mallows, a Saucer full of Honey, a quarter of a pound of Sheeps Tallow, beat them together, and ſet them on the fire until they are well ſodden, and then lay it hot to the Tent, and ſew a cloth faſt about it, and ſo let it reſt five days, and it ſhall cure him.

For a Back Sinew-ſtrain, or any other Strain.

Take an ounce of Turpentine, and two or three ſpoonfuls of Aqua vitæ, and beat them together, till they come to a perfect Salve, then anoint the ſtrain very well therewith, and heat it either with a hot Brick, or Bar of Iron; and thus doing three or four times, it will take away the ſtrain.

For a frothy Hoof.

Firſt with an Inſtrument make hollow the extre-

extremities of the Hoof on the outſide, till the principal Vein break; let all the blood come forth, then fill up the hole with fine Salt and Hurds ſteeped in Vinegar, and then bind them, ſo that they ſhall not fall off. This is a ſure way to make a hard and ſound Hoof.

Of the Atteint.

It is a diſtemper that proceeds from an over-reaching before; and if it be behind, it is the treading of another Horſe, which every ordinary Farrier knows how to cure, and therefore we ſhall wave it.

Of the Mourning of the Tongue.

I ſhall paſs over this diſtemper as 'tis held incurable.

A Remedy for a Pinch or a Gall in the Withers.

Firſt cut out the dead fleſh, and make a Tent with the White of an Egg, and then waſh the part with warm white Wine, and afterwards anoint the ſore place with white ſweet Suet.

A preſent Remedy for the Staggers.

When you find your Horſe diſtempered in his Head, then take a piece of woollen Cloth, and bind it faſt to the end of a ſtick, being well rubbed with good Barbary Sope, and then put it into both his Noſtrils with as much eaſe as you, and it will draw it forth very gently again: This is a perfect Remedy.

An

An excellent Remedy for the Strangles.

When you firſt ſee the Strangles growing, prick them under the Throat in the morning, and after cover the Horſes head with a Linnen cloth, and then rub him often under the Throat with freſh Butter on the ſore place, and it will cure him.

A Remedy for the Swelling of the Cods.

Take ſtrong Vinegar, white Chalk well powdered, ſtir it well, and make a Paſte, anoint the Cods of the Horſe three or four times a day, and in few days it will cure him.

A Remedy for the Mattering of the Yard.

Take a pint of white Wine, boil therein a quart of Roche-Allum, and with a Squirt thruſt it very far into his Yard; ſquirt the ſame ſome three or four times to pierce and cleanſe the bottom from the filth, and thus continue until he be whole.

An excellent Cure for the Tetter.

Before you meddle with the place, firſt draw blood from his Legs, and then ſtrike the Veins of the Legs on the outſide, and on the inſide, but not on the place where the Hoof comes forth, then waſh the place with white Wine, and mingle the Juyce of Prunella with powder of Galls and clear Water, and with this Liquor beat the Hogs Greaſe and liquid Pitch, that all become like Honey, and having ſo done, anoint the Tetter, and in ſix times dreſſing it will be cured.

A rare Medicine for a ſore Back, be it never ſo wrung with a Saddle.

Take of Sheeps Dung to the quantity of three parts of your Plaiſter, and the fourth part of dry Wheat and Rye-flour, and mingle them well together, and let them boil a quarter of an hour in good fair water, and then lay it on warm, and at two or three times applying, it will cure the Back: This is a tryed and approved Plaiſter.

For the Botch in the Groyns of the Horſe.

The Cure is, to take of Wheat-flour, Turpentine, and Honey, of each a like quantity, ſtirring it to make a ſtiff Plaiſter, and to lay it to the Sore to break it, and then lance it: tent it with Turpentine and Hogs Creaſe.

A Remedy for the Lax.

Take of Bean-flour and Bole Armony, of each a quartern, mingled in a quart of red Wine, give it him luke-warm, and after it, let him drink warm water, with Bean-flour; but if that will not ſtay him, then give him half a penny-worth of Allum beaten into powder, and Bole Armony beaten ſmall, in a quart of Milk, ſtirring them till all the Milk be of a Curd, and this will ſtop him.

A Remedy for the Coſtiveneſs or Belly-bound.

Take of the Decoction of Mallows a quart, put to it half a pint of Oyl, or ſo much Butter, an ounce of Benedict Laxative, and pour it into

to his Fundament with a little Horn, and hold his Tayl cloſe to his Fundament, whilſt another doth lead him, and ſo keep it in him as long as you can, and after keep him warm, and give him warm water to drink.

An excellent Remedy for the Yellows.

The cauſe thereof is the abundance of bad humours; the Cure is plain: Let him blood, if you ſee it yellow, a pottle, then give him a quart of white Wine, of Saffron and Tamerisk of each half an ounce, and the Juyce that is wrung out of two handfuls of Selandine; let him take it blood-warm, and keep him warm, and with good Maſhes, wherein put two ſpoonfuls of the powder of Brimſtone. Some will give him in this Drink the green Ordure of Geeſe ſtrained.

A Remedy for the Swelling of the Gums.

The Cure is, to make him to bleed well in the Palate of the Mouth, and alſo to ſcarifie the rank Gums, that the blood may come out, then rub them ſoundly with Vinegar and Salt.

A Remedy for the Rifts and Corruption in the Palate of the Mouth.

Take ſharp Vinegar and Salt, and waſh the ſame, and then anoint it with Honey. For the Lampas and Bladders in the Mouth (as we have ſaid) every Smith can cure it.

A certain Remedy for the Camey in the Mouth.

This diſtemper proceeds from the eating of

filthy Hay, that Cats, Dogs, and other Vermine have piſſed upon, which will cauſe the Horſes mouth to be clammy and furred, ſo that he will not eat. The Cure is, to let him blood in two great Veins under the Tongue, and to waſh his mouth with Vinegar and Salt, and to give him new Bread that is not hot.

A Remedy for the Heat in the Mouth.

Turn up the upper Lip, and jag it with a Lancet, that it may bleed, and waſh it with Vinegar and Salt.

A Remedy for a Cold in the Head.

The cauſe proceeds from ſome heat, or ſtanding too much ſtill, or from having ſome Air piercing his head when he is hot, or by ſome humours congealed after long reſt, and full feeding, and through the want of exerciſe to expel the ſame. The ſigns are a continual diſtilling Rheum, wateriſh Eyes, or his ſhort drawing of breath at the Noſtrils, when the caves and paſſages of the breath are ill ſtopt. The Cure is, put upon his head a double hood, and every morning ride him when he is faſting, take two Gooſe-feathers dipt in Oyl of Bay, and thruſt them up into his Noſtrils, through the ends whereof with a Needle put two threds to faſten the ſame to the head-ſtall, ſo as that the feathers may not fall out, and to the Snaffle and Bit that he is rid with,

with, faſten a Root or two of Polypodium of the Oak, which hath been ſteeped all night in Spike Oyl, and every time you ride him, anoint the ſame with the ſame Oyl, and when he cometh home, put on his head the double Hood, and perfume him hot with Frankincenſe, caſting a cloth over his head: Uſe him thus nine days together, and give him warm water or good Maſhes, during the ſaid nine days; for all Rheums of continuance are very dangerous, and many times remedileſs, leaving behind them a worſe diſeaſe then themſelves.

An excellent Remedy for the Canker in the Mouth.

Waſh the Mouth with ſtrong Vinegar, made thick with the powder of Allum, two or three days together, to deſtroy the exulcerate matter; then take a quart of fair water, of Allum four ounces, of Honey four or five ſpoonfuls, of Maudlin-leaves, of Sage-leaves, and Columbine-leaves, of each a handful; boil all theſe together till half be conſumed, and then every time being warmed, waſh the ſame two or three days, and it will heal it.

Of the Louſie.

There are Horſes that will be louſie; this diſtemper of theirs proceeds from too much leanneſs, cold, and ill keeping: it is moſt commonly amongſt young Horſes. We ſhall not

inſiſt upon the Remedy of it, as it is ſo familiarly practiſed by every Smith.

Of the Repairing of a broken Hoof, that it may grow.

Take of Garlick-heads ſeven ounces, of Herb Grace, three handfuls of Allum beaten and ſifted, of Barrows Greaſe that is old two pound; mingle all theſe with Aſſes Dung, boil them together, and anoint the Hoof therewith.

A certain Remedy for the Fretting of the Guts.

Take in the morning a quart of good Ale, four ounces of Fenugreek, ſeven ounces of Bayberries, as much long Pepper, an ounce of Ginger, two ounces of Watercreſſes, an handful of Sage, another of Mints; beat them together in Ale, then ſtrain it, and give it him blood-warm, rope all his Legs, and tye him ſo, that he lye not down; put him into a ſweat, keep him hot, give him no cold water for three days after, feed him with dry Beans and Oats, and the Horſe will recover.

Of pulling out of Shivers or Thorns, and of Swelling.

The Cure is, to pull them out, if they may be ſeen; but if there be ſuch a Swelling, that they cannot be ſeen, then take Wormwood, Paretory, Bearsfoot, Hogs-greaſe, and Honey, boil them together, and being hot, make a Plaiſter.

Plaiſter. It is an excellent Remedy for any Swelling, ſo alſo is Wine-lees, Wheat-flour, and Cummin boiled together, and when it is at a head, lance it.

Of the Strangullion.

It is an eaſie diſeaſe to cure, but the Horſe will be ſore ſick with it; it proceedeth from a chafing heat, that will make him ſweat, and afterwards it will riſe and ſwell in divers parts of his body, as big as a mans fiſt: It will break of it ſelf, if it be kept warm.

Of Blindneſs.

A Horſe will be blind with too much labour: This diſtemper, if it be young and taken betimes, is beſt cured by giving of him eaſe.

Of the Foaling of the Yard, with the Remedy.

The Cure is, to waſh the ſame with warm white Wine, and anoint it with Oyl of Roſes and Honey mingled together, then put it up with a Cod-piece of Truſs, keep it up ſtill, and dreſs him every day once till he be whole.

Of the Millets, without Remedy.

This diſtemper appeareth in the Fetlocks behind; it cauſeth the hair to ſhed three or four inches in length, and a quarter of an inch in bredth, like as if it were bare. It is ſeldom or never cured, but a Horſe may live, being purged with ordinary Purges, for a long time with this diſtemper.

An excellent Remedy for the Stringhault, or any old Strain or Lameneſs in the ſinewy Joynts.

Take Boars Greaſe, Bole Armoniack, black Sope, and Nerve-Oyl, of each a like quantity, boil them all together, and then apply it hot to the Grief, rubbing and chafing it, and alſo heating it very well, either with a hot Brick, Brick-bat, or hot Fire-ſhovel: Thus do once every day until the pain be gone. The String hault is a diſtemper which maketh the Horſe to twitch up his Leg; it proceeds for the moſt part from a cold: it ſeldom appears outwardly.

A Remedy approved for the Hide-bound, by ſome improperly called the Affreyde.

The cauſe thereof is a ſudden cold after a great heat; when the Pores are open, the cold entreth, and maketh an attraction of the Sinews, ſo as that the Horſe ſeemeth to go or travel with great grief, his skin being as it were ſtarched, ſhrunk, and clinging to his Ribs. The Cure is, to let him blood in both the Flank-veins, being next the girding place and the Flanks; then take a quart of white Wine, and put thereinto three ounces of Sallet-Oyl, and of Cummin one ounce, of Aniſeeds two ounces, Liquoris two ounces beaten into a powder, and give it him warm, then let him be rubbed half an hour together; cover all his Back with a Sack throughly ſoakt in a Tub

Tub of water, and the water wrung out of it, and upon that caſt many cloaths, and gird them faſt unto him to bring him to a ſweat, which is the only and chief thing to recover him; then keep him with good Maſhes, and every day let him be ſo uſed for ſeven or eight days together, give him much ſodden Barley and Beans for his diet, and green Mault on the floor, and after the eight days, let him blood in the two Breaſt-veins, about a pint, then give him to the quantity of a pint and a half of Sack, and a quarter of a pint of Sallet-Oyl, four penny worth of the beſt Treacle; ride him until he ſweat, then preſently ſet him in a warm Stable, and keep him hot: at night give him a good Maſh of Mault, with the powder of Brimſtone, to the quantity of two ſpoonfuls.

A Remedy for the Hurt of the Tongue with a Bit.

The Cure is, to waſh it with Allum-water, then take black Bramble-leaves, and chop them with Jard, and put them within a clout, and make them as round as a Ball, then dip the ſame in Honey, and anoint the Tongue therewith until it be whole.

A Remedy for the Giggs in the Mouth.

They are ſwellings with black heads growing on the inſide of the Lips. The Cure is, to ſlit them, and thruſt out the corruption,

and to waſh the ſame with Vinegar and Salt.

An excellent Receipt to fatten a Horſe.

This way I have experienced, and found it to be good and certain: Take of Elicampane, of Cummin-ſeeds, of Tamerisk, of Aniſeeds, of each two ounces; of Grounſel a handful; boil all theſe very well with three heads of Garlick, cleanſed and ſtamped in a Gallon of ſtrong Ale, then ſtrain it well, and give the Horſe a quart luke-warm in the morning faſting, then ride him till that he be warm, ſet him up hot. Thus do for four or five mornings, then turn the Horſe to Graſs (if it be a fit and ſuitable time of the year) and he will feed heartily. But if the time of the year ſerve not for Graſs, then you muſt keep him in the Houſe, and over and beſides the Drink before preſcribed, you muſt take fine powder of Elicampane, and the fine powder of Cummin-ſeeds, of each a like quantity; mix them well together, then every time that you give your Horſes Provender, which ſhould be thrice a day, in the morning, noon, and night, take half an ounce of this powder, and ſprinkle it by little and little, and a little into his Provender, for fear he ſhould nauſeate it, until it be all eaten up. And thus do for fourteen days together at the leaſt, and you ſhall ſee the Horſe proſper in a wonderful and ſtrange manner.

An excellent Remedy againſt a Horſes ſurfeiting with Provender.

When a Horſe hath eaten more then his ſtomach can well digeſt, he is in much pain, ſo as that he is not able to ſtand, but lyeth and walloweth as if he had the Bots. The Cure is, to let him blood, and to draw his Yard and waſh it, put a piece of a Clove of Garlick into it, to make him piſs: give him alſo a Clyſter with the water of ſodden Mallows, freſh Butter, and Sallet-Oyl; keep him warm, and let him eat very little for four or five days.

Theſe following things are moſt excellent to put into a Horſes Provender, to preſerve him from Diſeaſes.

The powder of Wolfes Liver, the powder of Enula Campana, the powder of Polypodium of the Oak, fine cut pieces of Rhubarb, the powder of Brimſtone made fine, the powder of Liquoris, Aniſeeds, Fenugreek, Turmerick, Bay-berries, long Pepper, Agrimony, Chamomil, Wormwood, Savin, Linſeed, Smallage, Parſley, Rue, Hyſop, Coltsfoot, Horehound, and ſuch like.

Of the Catarrh in Hogs, with the Remedy.

It is a Rheum which makes their Eyes to water, and a moiſture to aſcend up into the Head, which breedeth a corrupt matter, ſomewhat of affinity with the Plague. It ſeiſeth upon

upon them for the moſt part from their eating of too much fruit that lyes rotten under the Trees. For this diſtemper Marſh-mallows are excellently good mixt amongſt their meat.

Approved Cures for a Hog bitten by a mad, or by other Dogs.

If he be bitten by a mad Dog, take of ſtrong Chamber-lye, and mix it with Bay-Salt and Soot, and put therein an Addle Egg or two, then beat them all together, and make it boil a little, then rub the place as hot as he may well endure it without ſcalding, with a ſtick, and a clout tyed to the end of it. Uſe this twice or thrice, and he ſhall do well. But if he be bitten by other Dogs, that he is like to come by an Impoſtume, to avoid the danger thereof, you muſt waſh his Wound betimes with Stale, Salt, and Nettles bruiſed, or Vinegar and Mallows boiled together, and ſome Hogs Greaſe put thereunto, and therewith bathe the Sore; then anoint with Tar and freſh Greaſe mixed together, and he ſhall do well.

An approved Remedy for the Staggers or ſtirring Diſeaſe in Hogs.

The Cure is, to put Sea-bur Knob in the roof of their mouths; cut it, and let it bleed, and take the powder of Lemmon and Salt, and rub it therewith, then let them have a little Stale, and they will recover.

To

To make a Hog to ſcour.

Give him ſmoaked Barley in the ſtraw, as it is alſo ſtewed for the wethering of a Cow to help her.

Of the Lethargy in Hogs, with the Remedy.

If this diſeaſe come, the Hog-herds ſhut up all their Hogs together in one Houſe, and let them there remain a day and a night together without any meat or drink. The next day after give them water in which is ſtamped the Roots of wild Cucumbers. And as many as have drunk thereof, will begin to vomit, and afterwards by vomiting are purged and cleared from the diſtemper.

A Remedy for the Lask in Hogs.

Give them dryed Beans, beaten Savil, mixed with Broom.

To kill Maggots in Hogs.

If they breed in the Ear or otherwiſe, in any hollow place under the skin, you muſt take the Juyce of Hemlock, and pour it into the hole, and it will kill them; or elſe they will immediately void them of a great bigneſs.

An approved Remedy for the Diſeaſe in Hogs, called the Milt.

The Remedy is, by making them Troughs to feed out, of a Wood in Latine called *Tamerix*, which in Engliſh is called Quick Beanwood, out of which will come ſuch a moiſture, that it will heal the inflammation of the diſ-

eaſe;

eaſe; for ſometimes there proceeds ſuch an inflammation from the Milt, that it breeds a Peſtilence.

To cure Hogs that have eaten of poyſonous Herbs.

Such as Henbane and Hemlock; to cure them, you muſt give them the Juyce of Cucumbers warmed, the which being drunk, will cauſe them to vomit, by which they cleanſe their ſtomachs, and recover their healths again. There are two other Herbs, the Cameleon Thiſtle and the Gooſe-foot, which are death for them to eat.

To cure the Impoſtumes under the Hogs Throats.

When they have Impoſtumes and Kernels under their Throats, they ought to be let blood under the Tongue, and when that you have drawn blood ſufficiently, you muſt rub and chafe all his Throat and Groyn.

An approved Cure of the Garget in Hogs.

This is a dangerous diſeaſe, that many of them dye of; it is a Swelling and Inflammation of the Throat, behind the Jaws of a Hog. I cannot be acquainted with any other Remedy; for it is but this, that they uſe to ſlit it in the midſt, as long as the Inflammation or Sore is, and then to flay up the skin on both ſides of the ſlits, and ſo far as the Sore is, rub it with Nettles and Salt, and lay Tar upon it, and he ſhall recover.

A Remedy, together with a Bath for a Swine that hath the Swine-Pox.

For the Cure, give them the powder of Brimſtone with ſome Stale. A Bath to waſh them, is as follows: Take Yarrow, Plantane, Primroſe-leaves, Bryar-leaves, old Oaken-leaves of a year, of watry Bettony, of each two handfuls: boil them in two Gallons of running Water, till that they are tender, and then waſh your Hogs and Pigs therewith, and uſe this once or twice, and it will dry it up.

A Remedy for louſie Hogs.

This diſeaſe comes to them from Leanneſs, and want of good keeping in Winter; for ſo long as they are louſie, they will not thrive. The Remedy is, take Quick-ſilver, and kill it with Sallet-Oyl and faſting Spittle, then mix therewith a freſh Greaſe, or Neats-foot Oyl, and ſo anoint them all over.

Preſervatives againſt the Meazles, with the moſt approved Cures of them in Hogs.

To keep and ſave your Hogs from being meaſled, take this courſe: You ſhall uſe in the Summer, eſpecially in the Dog-dáys (which laſt from the midſt of *July* to the middle of *Auguſt*) to give them amongſt their Waſh and other meat, chopped cold Herbs, of Lettice, Endive, Succory, Violet-leaves, of Dandelion, Sow-thiſtle, or Sumitors, and ſuch like, chop a quan-

quantity of theſe amongſt their meat to keep them cool. Another is, to take a quart of ſtale Piſs or mens Urine, that hath been kept very long, and therein put a good handful of a pound of black Sope, ſtir and mix it well together with the Piſs, then put therein a quantity of Whey, force the Hog, if he be nice, to drink it. Let him reſt two or three hours after it, and then give him ſome other meat, not much: and ſo let him reſt without any other ſuſtenance until the next morning, for a weeks ſpace or more, as you ſhall have cauſe, and you ſhall ſee this Experiment made good.

To fat Sheep.

All things will fatten Sheep, which are mingled with ſalt water, as Vetches, Bran, Chaff, and ſuch like.

To make the Wool to come again.

If the Wool of the Sheep after they have been ſcabby, do fall off, as in ſome places the Wool will go clear off: to make it grow again, and ſupply the ſame places, greaſe them with Butter mixed with Tar, Oyl, Gooſe-greaſe, or freſh Greaſe; for Tar alone is too ſharp, a fretter and a whealer, without it be mixed with ſome of the aforeſaid Ingredients.

Of the Red Water, with the Remedy.

This is a certain Bladder with water under the tip of the Heart, which ſcalds and conſumes the Heart, and at length will kill the Sheep.

Sheep. The beſt help is for ſome nights to chaſe them with a Dog, which will preſerve them from the miſchief of this diſtemper.

An excellent Remedy for the Cough of a Sheep.

You muſt give him in the morning with a Horn, a little of ſweet Almonds, mixed with a little white Wine. Let him take it warm; let him have new ſtraw, and make him to eat of the Colt-herb growing on Lands: ſome call it Horſe-hoof.

Of the cloven Peſil.

There is no other Remedy, when he is a Lamb, but to keep it clean till it be bigger; anoint him with Tar, and when he is in reaſonable caſe, kill him, for there is no cure for it.

A Remedy for the Flegm.

Put the tender tops or branches of Savory into their Noſtrils, or Baſil into their Noſes, which will cauſe them to ſneeze, but you muſt cloſe their Eyes. You may alſo take of the Juyce of Briony with honyed Water.

To kill Maggots.

Take Oyl of Olive, and the powder of Brimſtone, and ſo anoint therewith; or of the powder of Brimſtone and Tar mixed together, and warmed over a ſoft fire.

A Remedy for the Water in the Belly or Head.

Stamp and ſtrain of two-penny Graſs, and give it him in boiled Wine. Againſt any water in the Head, boil Purſlane in honyed water ſtrained, and ſo give it him.

For the Worms in the Guts, the Remedy.

Take a quantity of the Juyce of Horehound, with ſome Leek-blades, and bruiſe them, and ſo give it to him, and it will help him.

Of the Tin-worm.

It is a ſmall red Worm with many Legs, much like to a Hogs Louſe, they creep in the Graſs: if Sheep, or any other Cattel do eat one, they will ſwell, and within a day or two dye, if they are not cured. To effect which, take a quantity of Stale and Salt, and ſtir them together, and give it him ſo, chaſe him a while after: or give him the Juyce of the Herb Robert, and it will recover him.

A Remedy for the Looſneſs of the Teeth.

For the Cure, take the tender Crops of Bryars, called the Black Bryar, and put it amongſt his meat, and his Teeth will faſten again in the eating thereof.

A Remedy for the Flowing of the Gall.

Give him half a ſpoonful of Aqua vitæ, mixed with ſo much Vinegar, and let him blood under the Tayl, and he will mend.

A Remedy for the Choler in Sheep.

'Tis cured by giving the ſtale Urine of men.

A Cure for the Louſie in Sheep.

Take Quick-ſilver killed in Oyl Olive or Spittle, and therewith anoint him.

Of the Wild-fire.

This is a diſeaſe counted incurable, the Shepherds have no other way but to keep the Sheep warm, and to nouriſh him with Goats milk, the which will mitigate the diſtemper of the violence of the fire.

A Remedy for a Sheep that hath loſt her Quide.

If a Sheep hath loſt her Quide, notwithſtanding ſhe will eat all the day, and caſt it up in the night again (which caſting will be like to the Paunch of a Beaſt) for ſhe cannot digeſt it, but pine away by little and little. For the Cure, you muſt take Quide-wort that groweth amongſt Corn like to Groundſel; bruiſe a quantity thereof, and then mark when you do ſee another Sheep chew the Quide, and take part of her Quide out of her mouth, and mix it with the bruiſed Quide-wort, and roll it together, and ſo give it, make her ſwallow it, and ſhe will do well.

An excellent Cure for the Staggers in Sheep.

Take of long Pepper, of Liquoriſh, of Aniſeeds, of Hemp-ſeeds, and of Honey, of each a

penny-worth; heat all these together, and put therein a pottle of new Milk, and stir the Honey and it with the rest altogether, and thereof give to each Lamb or Sheep two spoonfuls, or somewhat more luke-warm, and this will cure them.

Useful Preservatives when the Pestilence rageth amongst Sheep.

If it please God that all your Cattel are sick, first you must change your pasture, and your watering places, and drive your Cattel further off into other pastures. If the Pestilence or Murrain rush violently on them with great heats, you must have them to coverts, shades, and cold places. If it proceed from cold, you must have them into open places against the Sun, you must drive them very softly, keeping them in a kind of gentle exercise, yet not to let them rest and lye too much. And when that you have brought them to the appointed place, you must part them into many Troops and Bands, and there let them be carefully lookt to.

A Remedy for the short Breath and Pursie.

You must cut their Ears, and change their pasture, also slit their Nostrils: Some hold it necessary to give them Aniseeds, Liquoris, and Sugar-candy; all finely beaten together, and mixed with old Grease, or of the powder of Juniper-berries, administred to them with the Juyce of Angelica, with a Horn in Wine or Water, is excellently good. To

To help the Wethering of a Sheep.

Stamp the Leaves of Mallows with ſtrong Ale, and give it to the Ew, and ſhe ſhall do well; the Juyce of Mugwort will do the like.

A Remedy for the turning Diſeaſe in the Sheep.

This diſtemper cauſes them to hold their heads on one ſide; if ſhe hold her head on the right ſide, you muſt ſtrike off the Horn on the left ſide; for under the Horn there is a Worm which you muſt anoint with Tar, then bind a cloth on it, and the Sheep will recover.

For the Jaundice.

The ſtale Urine of men is accounted the beſt Remedy.

A Remedy for the Water in the Belly of a Sheep.

You muſt cut a hole in the Belly of the Sheep, put in a feather, and let out the water, and ſtitch it up again.

A Remedy for the Water-bladder under the Chin.

If you feel it, you ſhall find it ſoft; there is no other way but to lance it a little, and then to tar it.

A Remedy for the Lung-ſick or Purſineſs.

Stamp Lungwort, and ſtrain it with a little Honey-water, and give them of the Juyce of Carduus Benedictus, called by ſome Sow-Thiſtle mixt with warm Ale, and it will by Gods Bleſſing cure them.

To cure the Glanders or Snivel.

If this diſeaſe continue upon the Sheep two days, the beſt way will be either to ſeparate him from the reſt, or to kill him. Some uſe for the Remedy to take a ſtick, and therewith to take out all they can get out, and ſo to make the ſheep clean, when any occaſion is, upon which he will ſomewhat recover. Others give them the Juyce of Bettony with honyed water, and the Herb called Bucks-beard, which groweth higher then that which in Latine is called *Picnomenon*. This Herb ſtamped and given with Wine, is marvellous good againſt cold or flegm in any parts of their bodies.

To cure the Itch or Scab in Sheep.

Anoint with Gooſe-greaſe and Tar mixed together with the tender Crops of Broom in *May*, ſtamp and boil them with Gooſe-greaſe, put Tar to them with a like proportion, then make two ſhends on both ſides of his Back-bone, from his head to his tayl, and anoint with the aforeſaid Greaſe, and you ſhall need no more anointing. There is a ſcabbineſs alſo amongſt Lambs, being half a year old, towards Winter, or the next Fall of the Leaf; (the Shepherds ſay) the cauſe is, for that the Rams at that time are ſcabby that get them, and that then all the Lambs ſhall be ſcabby at the next Fall. To heal this diſtemper, you muſt greaſe them with Tar mixt with freſh

Greaſe, of Neats-foot Oyl, or Gooſe-greaſe. There is another ſcabbineſs which happens ſometimes on the Mouſels of the ſheep, and that proceeds from the place where there is great plenty of Furs and Gorſe, they by the eating of the tops and flowers thereof, do prick their Lips and Mouſels, from whence come ſcabs, which you muſt heal by anointing them with freſh Butter. There is another ſcab which they have, which comes through the negligence of the Shepherds, when they ſuffer them to feed on the Graſs covered with Dew. To remedy this, take Salt and Hyſop a little quantity beaten together, and therewith fret and chafe the Palate of the Mouth, the Tongue, and all over the Mouſel, and they will be cured.

An excellent Remedy for the Giddineſs in Sheep.

This diſtemper proceeds from a Bladder in their heads, you ſhall find it ſoft under your finger, and there you muſt cut it For any other pains or Giddineſs of the head, theſe following Remedies are ſpecial good: Take the Juyce of Ivy-leaves, and put thereof into his Ear, and bind or cloſe it, ſo that it may not be caſt out, or the Juyce of wild Thyme, ſtamped with Ale ſtrained and given him.

Approved Remedies for the Haw in the Eye, and other Diſtempers of the Eyes.

Drop into the Eye Juyce of Chamomil, or

Crows-foot Herb, ſtampt and laid to. Againſt any hot cauſe or pain of the Eyes, to let the Juyce of Dragon Herb, or the Juyce of Lettice lye to it plaiſter-wiſe. For a cold cauſe, take the Juyce of Clary mixed with Honey, and drop it in. Alſo the Juyce of Pimpernel put into the Eyes, and laid to, will break and kill every Haw or other Impoſtumes in the Eyes.

Of a ſtop in the Teats.

There is ſometimes on Ews Teats a certain ſmall Mote or Scab with a black head, hanging unto it a hard watry ſtring like flegm, which is within the Teat, which will ſtop her Milk: Therefore the Shepherd muſt have a preventive Cure in lambing time.

How to ſet and ſee over the Sheepfold.

THe beſt time to ſet over the Sheepfold is in *May*. Let it be ſet upon Rye-ground, if the Husbandman or Shepherd have any, and to flit it every morning or night; and in the morning when he cometh to the Fold, let him not take out the ſheep preſently, but raiſe them up by degrees, and afterwards let them ſtand ſtill a good while, that they may dung and piſs. And let him go amongſt them, to ſee whether any of them have the Mathes, or be ſcabbed, and let him ſee and peruſe them three

or

or four times upon the one ſide, as often as upon the other ſide. And when that the Kells are gone beſide the Ground, then may they be let out of the Fold, and then let him drive them to the ſoundeſt place of the Field. But he that hath a fallow Field ſeparate to himſelf, let him occupy and poſſeſs no Fold; for folding of ſheep maketh them ſcabbed, and breedeth Mathes: and when a ſtorm of ill weather comes, they cannot flye nor go away, which muſt very much abate them of their fleſh. But let that Husbandman that hath ſeveral fallow Fields, drive twenty, thirty, or forty ſtakes, according to the number of his ſheep, upon his fallow where he would ſet his Fold, and that more eſpecially in the furtheſt Eaſt part of the Field, from thence as they came in, for their going upon the Ground doth much good: and let the Shepherd bring his ſheep to the ſtakes, and the ſheep will rub themſelves on the ſtakes. And let the Shepherd walk about them till they are ſet, and ſo order them for two or three nights, and they will follow thoſe ſtakes as he flitteth them, and ſet by them. And if any ill weather comes, they will riſe up, and go to the Hedge: This manner of folding ſhall keep them from breeding of Mathes and Scabs, nor in the leaſt manner abate of their fleſh; it will alſo preſerve them from rotting. In the morning let the

Shepherd put them out of their Paſtures, he ſhall not need to have any Hurdles or Sheep-flecks.

What time of the year the Rams ſhould be put to the Ews.

A Husbandman (as I have already ſaid) cannot ſo well thrive of his Corn, except he have other Cattel, nor by his Cattel without Corn; for otherwiſe he ſhall be a Buyer, a Borrower, or a Begger: and becauſe that ſheep, in my opinion, are the profitableſt Cattel that a Husbandman can have, I ſhall diſcourſe the more at large of them. It will therefore firſt be a neceſſary thing for the Husbandman or Shepherd to know what time he ſhall put the Ram to the Ews. In this particular I muſt make a diſtinction; for all times are not alike to put to the Rams, for upon the miſtake of time, there may be a great damage or loſs; for that man that hath the beſt Sheep-paſture for winter, and ſome ſpringing in the beginning of the year, he may ſuffer his Rams to go with his Ews all times of the year, to bliſſom or ride them when he will: but for the common Paſture, it is time to put to his Rams at the Exaltation of the Holy Croſs; for then the Buck goeth to the rut, and ſo would the Ram. But for the ordinary Husbandman

that

that hath no Paſture but the common Fields, it is time enough at the Feaſt of St. *Michael* the Archangel. And ſo for the poor Husbandman of the Peek, and ſuch others, that dwell in hilly or high Ground, that have no Paſture nor common Fields, for them *Simon* and *Judes* Day will be a very good time; and the reaſon is this: An Ew goeth with Lamb twenty weeks, and uſes to yean her Lamb in the twenty firſt week; and if ſhe have not convenient new Graſs to eat, ſhe will want Milk for her Lamb, for want of which there are many Lambs that periſh and are loſt, that through the leanneſs of the Dams, and their want of Milk, are forced to forſake their Lambs, ſo that in ſome hard Countries oftentimes they both dye.

To make an Ew to love her Lamb.

IF the Ew have Milk, and will not love her Lamb, put her into a narrow place made of Hordes or of ſmooth Trouſe, a yard wide, and put the Lamb to her to ſuck it; and if the Ew ſtrike or ſmite the Lamb with her head, bind her head with a Hay-rope or Cord to the ſide of the Pen, and if the Lamb will not ſtand ſide-long, call the Ew, and give her a little Hay, and tye a Dog by her, that ſhe may ſee him; and this fright will in a ſhort ſpace cauſe her

her to love her Lamb: and if he have a Lamb dead, whereof the Dam hath much milk, flay the Lamb, and tye that skin upon another Lambs back that hath a weak Dam with little milk, and put the good Ew and that Lamb together in the Pen, and in one hour ſhe will love the Lamb; and then he may take the weak Ew away, and put her in another place, and by this means he may ſave both hers and the Lambs life.

At what time Lambs ſhould be weaned.

IN ſome places they never ſever the Lambs from the Dams, which is for two cauſes; one is in the beſt paſture, where the Rams go away with their Ew, there it needeth not; for the Dams will grow dry, and wean the Lambs themſelves. Another cauſe is, he that hath no ſound paſture to put his Lambs into when they ſhould be weaned, he muſt either ſell them, or let them ſuck as long as the Dams will ſuffer them. It is a common Saying, That the Lamb ſhall not rot as long as it ſucketh, except the Dam want meat. But he that hath ſeveral and ſound paſtures, it is time for ſuch a one to wean his Lambs when they are ſixteen or eighteen weeks old at the fartheſt, and the Ew ſhall again the better take the Ram. And the poor man of the Peek Country, and ſuch other places where they uſe to milk their Ews five or ſix weeks, &c. ſpoil their Lambs, ſo as

that

that they are never ſo good as thoſe that ſuck long, and have meat enough.

To draw Sheep, and to ſever them in divers parts.

WHen the Grafier hath many Sheep in his Paſtures, it will be convenient for him to have a Sheepfold made with a good Hedge or a Pale, the which will eaſily receive all his ſheep that go in one paſture in a dry place, and adjoyning to the end of the ſame, let him make another little Fold that will contain ninty ſheep or more, and both theſe Folds muſt have either of them a Gate into either paſture, and at the end of that Fold let him make another little Fold that will receive forty ſheep or more, and between every Fold a Gate. And when the ſheep are in the great Fold, let forty of them or thereabouts, come into the middle-fold, and ſtake the gate, and then let the Shepherd turn them, and look on every ſide; and if he find any ſheep that needeth any help or cure for any cauſe, take that ſheep with his Hook, and put him into the little Fold. And when that he hath taken all that need any curing, then let him put the other into whether paſture he pleaſes, and let as many in of the great Fold, and take as many in as need any handling, and put them into the little Fold. And thus go them all over, till that he have done, and then let him melt

Greaſe,

Greaſe, and handle all thoſe that he hath drawn, and then ſhall not the great Flock be tarried and kept from their meat; and when he hath cured them, let him put them into their paſture.

To meddel Tar.

LEt the Shepherds Tar be medled with Oyl, Gooſe-greaſe, or Capons greaſe; theſe three are the beſt: For they will make the Tar to run and ſpread abroad. Butter and Swines greaſe, when they are melted, are good, ſo that they are not ſalt, for Tar of it ſelf is too ſharp, it is a fretter and no healer, without it be medled with ſome of theſe.

To make Broom-Salve.

A Medicine to ſalve poor mens ſheep that think Tar too coſtly, the worth of which, if ſome of the richer ſort knew, they would make uſe of it.

Let the Shepherd take a ſhere full of Broom, Crops, Leaves, Bloſſoms, and all, chop them very ſmall, and then ſethe them in a Pan of twenty Gallons with running Water, till it begin to grow thick like a Jelly, then let him take two pound of Sheep-ſuet melted, and a pottle of old Piſs, and as much Brine made with Salt: Let him put all into the ſaid Pan, and

ſtir

ſtir it about, and then ſtrain it thorow an old Cloth, and put it into what Veſſel he will. And if his ſheep be new clipped, then let him make it luke-warm, and then waſh them therewith with a Sponge, or a piece of an old Mantle, or of a folding of ſuch ſoft Cloth or Wool, for ſpending too much of his Salve. And at all times of the year he may uſe it as he ſhall have occaſion. Let him make wide ſheds in the wool of the ſheep, and anoint them with it, and it will heal the ſcab, and kill the ſheeps Lice, neither will it hurt the Wool in the ſale thereof. And thoſe that are waſhed, will not be ſcabby again, if they are well fed; for that is the beſt Greaſe that the Shepherd can greaſe the ſheep withal, to greaſe him in the mouth with good meat, which is a great preſervation of ſheep from rotting, except there come Mildews; for a ſheep will chuſe the beſt, if he have plenty.

To greaſe Sheep.

IF any Sheep be leabed, the Shepherd may perceive it by the biting, rubbing, or ſcratching with his Horn, and moſt commonly the Wool will riſe, and be thin or bare in that place. Then let the Shepherd take him, and ſhed the Wool with his fingers there where the ſcab is, and with his finger let him lay a little Tar thereupon, and ſtroke it in length at the

the bottom of the Wool, that it be not ſeen above, and ſo let him ſhew the Wool, and lay a little Tar thereupon, till he have paſſed the ſore, and then it will go no further.

To helt Sheep.

IF any Sheep ray, or be filled with Dung above the Tayl, let the Shepherd take a pair of Shears, and clip it away, and let him caſt dry Moulds thereupon; and if it be in the heat of Summer, it ſhould be rubbed over with a little Tar, to keep away the Flies. It is neceſſary that a Shepherd have a Board ſet faſt to the ſide of his little Fold, to lay his ſheep upon when he handleth them, and a hole bored in the Board with an Augur, and therein a grained ſtake of two foot long, to be ſet faſt, to hang his Tar-box upon, that it may not fall. A Shepherd alſo ſhould not go without his Dog, his Sheep-hook, and a pair of Shears, and his Tar-box, either with him, or ready at his Sheepfold, and he muſt teach his Dog to bark when he would have him; to run, and to leave running when he would have him, or elſe he is no right Shepherd. His Dog muſt he taught when he is a Whelp, otherwiſe it will be hard to make an old Dog ſtoop or to be plyant.

To wash Sheep.

IN *June* is the time to shear Sheep, and before that they are shorn, they must be very well washed, which as to the Owners sale of the Wool, is a very profitable help, and so to the Cloth-maker: but let the Shepherd beware that he put not too many sheep into a Pen at one time, neither at washing, nor at shearing, for fear of murthering or over-pressing of their fellow, and that not any of them go away till that they are clean washed. Let the Shepherd hold the sheep by the head in the water, and let him hold it high enough to preserve from drowning.

To shear Sheep.

LEt the Owner give his Shearers a special charge to take heed of their shears, lest they twitch the sheep, and especially for pricking with the point of the shears, and that the Shepherd be always ready with his Tar-box to salve them. And let him be sure that they are well marked, both Ear-mark and Pitch-mark, and Robel-mark, and let the Wool be well folded or wond with a Wool-wind, by one that hath good skill therein, the which shall very much advance the sale thereof.

How

How to draw out and ſeparate the bad Sheep from the good.

WHen the Shepherd hath ſhorn his ſheep, it will then be his beſt time to draw and ſeparate them in divers manners, the ſheep that he will have fed by themſelves, the Ews by themſelves, and the Share-hogs and Theves by themſelves, the Lambs by themſelves, the Weathers and the Rams by themſelves, if he have ſo many paſtures for them; for the biggeſt will beat the weakeſt with his head. And of every ſort of ſheep, it may happen that there are ſome that like not, but are weak; thoſe ſhould be put in the freſh Graſs by themſelves, and when that they are a little cured, as he ſees occaſion, he may ſell them. The often change of Graſs is very wholeſom and healthful for all manner of Cattel.

If a Sheep have the Mathes.

THe Shepherd may perceive this diſeaſe by the ſheeps biting, or friſking, or ſhaking of the Tayl: This diſtemper is moſt commonly moiſt and wet; and if it be nigh unto the Tayl, it is oftentimes green, and filled with the ſheeps dung, and then the Shepherd muſt take a pair of ſhears, and clip away the Wool bare

to

to the skin, let him take a handful of dry Moulds, and cast them upon the wet to dry it, and then wipe the Moulds away, and lay Tar there where the Maths were, and a little further. Let the Shepherd thus look to them every day, and cure them, if there be occasion.

Of the Blindness of Sheep.

THere are some Sheep that will be blind for a season, and yet mend again. Let the Shepherd put a little Tar in his Eye: this is the common Medicine that the Shepherds use.

Of the Worm in the Sheeps Foot, and Help thereof.

THere are some Sheeps Feet that have Worms in them, which makes them to halt. Let the Shepherd take the sheep, and look betwixt his Cleft, and there is a little hole as much as a great Pins head, wherein groweth five or six black hairs, an inch long, or more. Let the Shepherd take a sharp-pointed Knife, and slit the skin a quarter of an inch long about the hole, and as much beneath, and put his one hand in the hollow of the foot under the hinder Cleft; let him set his Thumb above almost at the slit, and thrust his finger underneath forward, and with his

other hand take the black hairs by the end, or with the Knifes point, and pull all the hairs by little and little, and thruſt after his other hand with his finger and his Thumb, and there will come out a Worm like a piece of fleſh, nigh as much as a little finger. And when it is out, let him put a little Tar into the hole, and it will quickly be cured.

Of the Blood, and the timely Remedy of it.

THere is a ſickneſs amongſt Sheep, which is called the Blood, of which they oftentimes dye ſuddenly: The ſigns of his death are, that he will ſtand ſtill, and hang down his head, and ſometimes quake. The Shepherds Remedy for this Diſeaſe is, to take the ſheep, and rub him about the head, and eſpecially about his Ears, and under his Eyes, and with his Knife let him cut off his Ears in the midſt; and alſo let him bleed in a Vein under his Eyes; if he bleed well, he is like to live; if he bleed not, then kill him, and ſave his fleſh; for if he dye by himſelf, the fleſh is loſt, and the skin will be far tuddier, liker to blood then any other skin ſhall be.

Of the Pocks, and the Remedy thereof.

THis Diſeaſe appears upon the skin in the likeneſs of red Purples, as broad as a Far-

thing.

thing. This diſtemper deſtroys many ſheep. To remedy this, the Shepherd is to handle all his ſheep, and to ſurvey and look on every part of their bodies, and as many as he finds taken therewith, let him put them into freſh new Graſs, and keep them from their fellows, and let him often have an Eye over his Flock, and draw them as he hath need. And if it be in Summer-time, that there be no Froſt, then let him waſh them.

Of the Wood-Evil, and the Remedy thereof.

THere is a ſickneſs amongſt Sheep, that is called the Wood-Evil. It taketh them in the Spring of the year, and taketh them moſt commonly in their Legs, or in their Neck, and maketh them to halt, and hold their Necks awry: For the moſt part thoſe that have this ſickneſs, dye within a day or two. The beſt Remedy is to waſh them a little, and to change their ground, to bring them to a low ground and freſh Graſs; for this ſickneſs is moſt commonly in Hilly, Ley, and Ferny Grounds. Some for this ſickneſs let their ſheep blood in a Vein under the Eye.

What are the things that chiefly rot Sheep.

IT is neceſſary that a Shepherd ſhould know what things chiefly rot the ſheep, that he

may the better preſerve them. There is a Graſs called Spearwort, it hath a long narrow Leaf, like a Spears head, it will grow a foot high, and it beareth a yellow flower as broad as a Penny. It groweth always in low places, where the water uſeth to ſtand in Winter. Another Graſs is called Penny-graſs, it groweth low, cloſe to the Earth in Mooriſh Grounds, it hath a Leaf as broad as Two-pence, but never beareth flower. All manner of Graſs that the Land-flood runs over, is bad for ſheep, becauſe of the ſand and the filth that ſticketh upon it. All Mooriſh Ground and Marſh-ground is bad for ſheep. The Graſs that groweth upon Fallows is not good for ſheep; for there is much of it weedy, and oftentimes it cometh up by the root, and that bringeth earth with it; and the ſheep eat both. Mildew-graſs is very bad for ſheep, and that we may find out by the Leaves of the Trees in the morning, and eſpecially of Oaks, take the Leaves, and put thy tongue to them, and thou ſhalt taſte like Honey upon them. Therefore the ſheep ſhould not be let out of the Fold till the Sun hath the power to dry up the Mildew. Want of food will cauſe a great Rot amongſt ſheep; for then they will have neither good fleſh nor good skins. White Sincles are very bad for ſheep in Paſtures and in Fallows. There is another Rot that is called the Pellet, which

which proceeds from great wet, eſpecially in woody Countries, where they find a want of drineſs.

To know rotten Sheep divers manner of ways, whereof ſome of them never fail.

LEt the Shepherd uſe both his hands, and twirl upon the Sheeps Eye, and if it be ruddy, and have red ſtrings in the White of the Eye, then the ſheep is ſound; but if the Eye be white like Tallow, and the ſtrings dark-colour'd, then he is rotten. Let him alſo take the ſheep upon the Wool of the ſide, and if his skin be ruddy-colour'd and dry, then he is ſound; but if it be pale-colour'd and watry, then he is rotten. Alſo when the Shepherd hath opened the Wool of the ſide, let him take a little of it betwixt his finger and his Thumb, and pull it a little, if it ſtick faſt, he is ſound; if it come lightly off, he is rotten. When a ſheep is killed, if his body be full of water, he is rotten, and alſo the fat of the fleſh will be yellow, if the Liver be cut, wherein will be little quickneſſes and live things like flocks, and alſo the Liver will be full of knots, and white Bliſters; if it be rotten, it will alſo break and crumble in pieces; but if the ſheep be ſound, it will hold firm together.

BRIEF

Experimental Directions

FOR

The Right Uſe of the

ANGLE.

HE that addreſſeth the River for his pleaſure, muſt be well prepared, as to the ſetting forth of his Tackle. The firſt thing he muſt do, is to obſerve the Sun, the Wind, the Moon, the Stars, and the Wanes of the Air; he muſt obſerve the Times and Seaſons to ſet forth his Tackles; to go for his pleaſure and for his profit. As for Example, the Sun proves cloudy, then muſt he ſet forth his Ground-bait or his Tackles, and of the brighteſt of his Flies. If the Sun proves bright, then muſt he put on ſome of the darkeſt of his Flies. Thus muſt he go to work with his

his Flies; light for darkneſs, and darkneſs for light: he muſt alſo obſerve that the wind be in the South, for that wind blows the Fly in the Trouts mouth. But if the weather be warm, it is indifferent where the wind ſtandeth, either with Ground-bait or Menow, ſo that he can caſt his Bait into the River. The very ſame obſervation is for night as for day; for if the Moon prove clear, nor if the Stars glitter in the Sky, there is as ill Angling that night, as if it were high noon in the midſt of Summer, when the Sun ſhineth brighteſt, there is little hopes of any pleaſure. For the petty *Thames* Recreation of catching of Bleaks, Dace, &c. as they are ſo generally known of every young Beginner, I am unwilling to trouble the Reader with ſuch a trifling Diſcourſe.

I ſhall begin, though not without ſome ſeeming digreſſion, firſt with the taking of Eels. When the Angler ſtays a night or two, let him take four or five Lines, ſuch as I ſhall inform hereafter will ſerve for Pikes of fourteen or fifteen yards long, and at every two yards make a Nooſe, to hang a Hook armed either to double thred, or ſilk twiſt: for it is better then Wyre. Let him bait his Hooks with Millers-thumbs, Loaches, Menows, or Gudgins: Let him tye to every Nooſe a Line baited. Theſe Lines muſt be laid croſs the River in the deepeſt places, either with ſtones,

or pegged, ſo that the Line lye in the bottom of the River, there will be no doubt of taking of a diſh of Eels; he muſt alſo have a ſmall Needle with an Eye, to bait his Hooks; he muſt make two Flies, the Palmer rubbed with Silver or Gold, and the *May*-Fly: Theſe are the ground of all Flies. To make the Palmer Fly, he muſt arm his Line on the inſide of the Hook; let him take his Sciſſers, and cut ſo much of the brown of the Mallards feathers, as in his own reaſon ſhall make the wings, then let him lay the outermoſt part of the feather next the Hook, and the point of the feather towards the ſhank of the Hook, let him whip it three or four times about the Hook with the ſame ſilk he armed the Hook, then make his ſilk faſt: Let him take the Hackle of the Neck of a Cock or a Capon, or a Plovers Top, which is the beſt, and let him take off the one ſide of the feather, then he muſt take the Hackle-ſilk, or gold or ſilver thred; and let him make all theſe faſt at the bent of the Hook, let him work them up to the wings, every bout ſhifting his fingers, and making a ſtop, then the gold will fall right, let him make it faſt; and work up the Hackle to the ſame place, and make the Hackle faſt; and let him take the Hook betwixt his finger and his thumb, in the left hand, with a Needle or Pin, part the wings in two; then with the arming ſilk, as he hath

faſt-

faſtned all hitherto, let him whip it about as it falleth croſs between the wings, and with his Thumb he muſt turn the point of the feather towards the bent of the Hook; then let him work it three or four times about the ſhank, ſo faſten it, and view the proportion. For other Flies: if he make the grounds of Hogs-wool, ſandy, black, or white, or the Wool of a Bear, or of a two years old red Bullock; he muſt work all theſe grounds upon a waxed ſilk, then he muſt arm and ſet on the wings, as I ſhewed before; for the *May*-Fly, let him work the body with ſome of theſe grounds, which will do very well, ribbed with black hair; he may alſo work the body with Cruels, imitating the colour, or with ſilver, ſuiting the wing. For the Oak-Fly, he muſt make him with orange, tawny and black for the body, and the brown of the Mallards feather for the wings.

To take a Perch, the Angler in the firſt place muſt take notice that this fiſh feeds well; and if he lights where they are, they will bite freely. My opinion is (with ſome more then ordinary Experience) for to bait with Lob-worms, chopt in pieces over night; let him go to his ſport in the morning betimes, let him plum his Ground, gage his Line, and bait his Hook with a red knotted Worm, or a Menow, which ſome hold better; let him put the Hook in at the back of the Menow, betwixt the fiſh

and

and the skin, that the Menow may ſwim up and down alive, being buoyed up with a Cork or a Quill, that the Menow may have liberty to ſwim a foot off the ground: So doing, the Angler ſhall not queſtion the profit or pleaſure of his expended time.

I do now think it convenient for me to ſhew my opinion for floating for Scale-fiſh in the River or Pond: the feed brings the fiſh together, as the Sheep to the Pen. There is nothing better in all Anglings for feed, then Blood and Grains, I hold it better then Paſte; then let him obſerve next to plum his ground, Angling with fine Tackles, as ſingle hair for half the Line next the Hook, round and ſmall plumed, according to his Float: For the Bait, there is a ſmall red Worm, with a yellow tip on his tayl, which is very good; Brandlins, Gentles, Paſte, or Cadice, which we call Cock-bait, they lye in a gravelly husk, under the ſtones in the River: Theſe are the moſt ſpecial Baits for theſe kind of fiſh.

There is a manner of trouling for a Pike with a Hazel-rod of twelve foot long, with a Ring of Wyre in the top of the Rod, for the Line to run thorow: within two foot of the bottom of the Rod, there is a hole made to put in a winde to turn with a Barrel, to gather up the Line, and to looſe it at pleaſure: this is the beſt manner of trouling. But I am of opinion

opinion that I can ſhew a way, either in Meer, Pond, or River, that ſhall take more Pikes then any Trouler with his Rod. And thus it is: Firſt, take a forked ſtick, a Line of twelve yards long wond upon it, at the upper end leave about a yard, either to tye a bunch of Sags, or a Bladder, to buoy up the fiſh, and to carry it from the ground: the Bait muſt be a live fiſh, either Dace, Gudgin, Roach, or a ſmall Trout: the forked ſtick muſt have a ſlit in the one ſide of the Fork to put in the Line, that he may ſet his live fiſh to ſwim at a gage, that when the Pike taketh the Bait, he may have the full liberty of the Line for his feed. He may turn theſe looſe either in the Pond or the River: in the Pond with the wind all the day long, the more the better: at night let him ſet ſome ſmall weight, that may ſtay the Buoy, as a Ship lyeth at Anchor, till the fiſh taketh. For the River, he muſt turn all looſe with the ſtream; two or three are ſufficient to ſhew pleaſure, gaged at ſuch a depth, as that they will go current down the River, where there ſhall be no doubt of excellent ſport, if there be Pikes: for the Hooks, they muſt be double Hooks, the ſhanks muſt be ſomewhat ſhorter then ordinary: my reaſon, the ſhorter the Hook is of the ſhank, it will hurt the fiſh the leſs, and it muſt be armed with ſmall Wyre well ſoftned. But I held a Hook armed with

twiſted

twiſted ſilk to be better. If you arm your Hook with Wyre, the Needle muſt be made with an Eye; then muſt he take one of thoſe Baits alive (which he can get) and with one of his Needles enter within a ſtraws bredth of the Gill of the fiſh, ſo pull the Needle betwixt the skin and the fiſh; then pull the Needle out at the hindmoſt fin, and draw the arming thorow the fiſh, until the Hook come to lye cloſe to the fiſhes body: But I hold for thoſe that are armed with Wyre, to take off the Hook, and put the Needle in the hindmoſt fin, and ſo to come out at the Gill; then let him put on the Hook drawn cloſe to the body, 'twill hurt the live fiſh the leſs, ſo knit the arming with the live fiſh to the Line; then let him put off either in Meer or Pond, with the wind, in the River with the ſtream: the more that he pulls off in Meer or Pond, he is the likelier to have the greater pleaſure. There is a time when Pikes go a frogging Ditches, and in the River to ſun them, as in *May*, *June*, and *July*, there is then a ſpeedy way to take them, and ſcarce to miſs one in twenty. The Angler muſt take a Line of ſix or eight foot, let him arm a large Hook, of the largeſt ſize that is made, and arm it to his Line, let him lead the ſhank of his Hook very handſomly, that it may be of ſuch a weight, that he may guide the Hook at his pleaſure: he may ſtrike the Pike that he ſees,

with

with the bare Hook where he pleaſes: This Line and Hook doth far exceed Snaring. The beſt ſport to take a Pike, is to take a Gooſe or Gander, or Duck; take one of the Pikes Lines I have before deſcribed, and let him tye the Line under the left wing, and over the right wing, about the body, as a man weareth his Belt: turn the Gooſe off into the Pond, where Pikes are, and there will be pleaſant rare Feats betwixt the Gooſe and the Pike.

To take a Carp either in Pond or River, If the Angler intends to have ſport with ſome profit, he muſt take a Peck of Ale-grains, and a good quantity of any Blood,. and mix the Grains and the Blood together, and caſt it in the place where he meant to Angle; this ſeed will gather the Scale-fiſh, as Carp, Tench, Roach, Dace, and Bream: the next morning let him be at his ſport very early, plum his ground, and he may Angle for the Carp with a ſtrong Line; the Bait muſt be either a red knotted Worm or Paſte, and he ſhall have ſport enough.

The Angler may begin to angle for a Trout with Ground-baits, in this manner following: Firſt, he muſt be ſure of a neat taper Rod, light before, with a tender Hazel top, which is very gentle, he may Angle with a ſingle hair of five lengths, one tyed to the other for the bottom of the Line, and a Line of three-haired Links

for

ſor the upper part, and ſo if he have good Sea-room, he may take the largeſt Trout that ſwims. He that angles with a Line made of three-haired Links at the bottom, and more at the top, may take Trouts: but he that angles with one hair, ſhall take five Trouts to the others one; for this fiſh is very quick-ſighted: Therefore the beſt way for night or day, is to keep out of ſight. He muſt angle always with the point of his Rod down the ſtream; for a fiſh hath not the quickneſs ſo perfect up the ſtream, as oppoſite againſt him, obſerving ſeaſonable times. As for Example; we begin to angle in *March*, if it prove cloudy, the Angler muſt angle with the Ground-baits all day long: but if it prove clear and bright, he muſt take the morning and evening, or elſe he is not like to do any good; for the times muſt be obſerved, and truly underſtood: For when an Angler cometh to the River for his pleaſure, that doth not underſtand to ſet forth his Tackles fit for the time, it is as good keeping of them in the Bag, as to ſet them forth.

The Angler that doth intend to angle with the Ground-baits, let him ſet his Tackles to his Rod, and let him begin at the uppermoſt part of the ſtream, carrying his Line with an upright hand, feeling the Plummet running on the ground ſome ten inches from the Hook, plumming his Line according to the ſwiftneſs

of

of the Stream that he angles in; for one Plummet will not ſerve for all Streams; for the true Angling is, that the Plummet runneth on the ground. For his Bait, let him take the red knotted Worm, which is very good where Brandlings are not to be had: now that he may make theſe Brandlings fit to be angled with, that they may live long upon the Hook, which cauſeth the ſport. When he hath gathered his Worms out of the Dunghil, he muſt get the greeneſt Moſs he can find, then waſh the Earth very clean out of it, then let him have an Earthen-pot to put his Moſs into it, and let him put his Worms to the Moſs in the Pot, and within two days he ſhall find his Worms ſo poor, that if he bait ſome of them on his Hook, he ſhall ſee that with throwing them two or three times into the water, they will dye and grow white. Now the skill is, when theſe Worms are grown poor, to feed them up, to make them fat and luſty, he muſt take the Yolk of an Egg, ſome eight or ten ſpoonfuls of the top of new Milk, beaten well together in a Porrenger; let him warm it a little until that it curdle, then let him take it off from the fire, and ſet it to cool; when it is cold, let him take a ſpoonful, and drop it upon his Moſs into the Pot, every drop about the bigneſs of a green Pea, ſhifting his Moſs twice a week in the Summer, and once in the Winter.

Winter. Thus doing, he ſhall feed his worms fat, and make them luſty, that they will live a long time on the Hook; thus he may keep them all the year long. This is my true Experience for the Ground-baits, for the running Line for the Trout.

The Angling with the Menow, called in ſome places Pencks, for a Trout, is a pleaſant ſport, that taketh the greateſt fiſh. The Trout comes as boldly to the Bait, as if it were a Maſtive-dog at a Bear: The Angler may uſe his ſtronger and greater Tackle, and it will be advantagious to him in his Angling, to uſe a Line made of three ſilks and three hairs twiſted for the uppermoſt part of the Line, and two ſilks & two hairs twiſted for the bottom next his Hook, with a Swivel nigh to the middle of his Line, with an indifferent large Hook.

Let him bait his Hook with a Menow, he muſt put his Hook through the lowermoſt part of his mouth, ſo draw his Hook thorow, then put the Hook in at the mouth again, and let the point of the Hook come out at the hindmoſt Fin, then let him draw his Line, and the Menows mouth will cloſe, that no water will get into its belly: He muſt angle (as hath been ſaid) with the point of his Angle down the Stream, drawing the Menow up the Stream by little and little, nigh the top of the water; the Trout ſeeing the Bait, cometh moſt fiercely

fiercely at it, the Angler muſt give a little time before he ſtrikes: This is a true way without Lead; for many times I have had them come at the Lead, and forſake the Menow, which he that tryes in time will prove.

My next task will be to inſtruct the young Angler how to angle with a Flye. Let him fit himſelf with a Hazel, either of one piece, or two ſet together in the moſt convenient manner, light and gentle: Let him ſet his Line to the Rod, for the uppermoſt part he may uſe his own diſcretion; for the lower part next his Fly, muſt be of three or four haired Links: If he can attain to angle with one hair, he ſhall have the more riſes, and take more fiſh; let him be ſure that he do not over-load himſelf with the length of his Line: and before that he begin to angle, let him make a tryal, having the wind on his back, to ſee at what length he can caſt his Flye, that the Flye light firſt into the water; for if any of the Line falleth into the water before the Flye, it had been better unthrown then thrown. Let him always caſt down the ſtream, with the wind behind him, and the Sun before: it is a great advantage for him to have the Sun or the Moon before him. Let him begin to angle in *March* with the Flye: but if the weather prove windy or cloudy, there are ſeveral kinds of Palmers that are good at that time. Firſt is a black Palmer

ribbed with ſilver: the ſecond, a black Palmer, with an Orange tawny body: thirdly, a black Palmer, with the body made of all black: fourthly, a red Palmer ribbed with gold, and a red Huckle mixed with Orange Cruel. Theſe Flies ſerve all the year long, morning and evening, whether windy or cloudy weather. But if the Air prove bright and clear, he may imitate the Hawthorn Fly, which is all black and very ſmall, and the ſmaller, the better. In *May* let him take the *May*-Fly, & imitate that, which is made ſeveral ways: Some make them with a ſhammy body, ribbed with a black hair: others make them with ſandy Hogs-wool, ribbed with black ſilk, and winged with a Mallards feather, ſeveral ways, according to the fancy of the Angler. There is another called the Oak-Fly, which is made of Orange-colour'd Cruel, and black, with a brown wing: another Fly, the body thereof is made with the ſtrain of a Peacocks-feather, which is very good in a bright day. The Graſhopper which is green, the ſmaller Flies are made of indifferent ſmall Hooks, which are the better: theſe ſeveral ſorts I have ſet down, will ſerve all the year long, obſerving the times and ſeaſons: And let him take notice, that the lighteſt Flies are for cloudy and dark weather, the darkeſt for bright and light, and the reſt for indifferent ſeaſons, for which

his

his own judgment, experience, and diſcretion muſt guide him; ſo that he muſt alter theſe Flies according to theſe directions. Of late days the Hogs-wool, of ſeveral colours, the wool of a red Heifer, and Bears-wool are made uſe of, which make good grounds; they are now very much uſed, and procure very good ſport. The natural Fly is a ſure way of angling, and will catch great ſtore of Trouts with much pleaſure. As for the *May*-Fly, he ſhall always have them playing at the River-ſide, eſpecially againſt Rain. The Oak-Fly is to be had on the But of an Oak, or an Aſh, from the beginning of *May* to the end of *Auguſt*: it is a browniſh Fly, and ſtands always with his head towards the root of the Tree, very eaſie to be found. The ſmall black Fly is to be had on every Hawthorn-buſh, after the Buds are come forth. The Graſhopper, which is green, is to be had in any Meadow of Graſs in *June* or *July*: with theſe Flies, he muſt uſe ſuch a Rod as to angle with the Ground-bait; the Line muſt not be as long as the Rod: Let him withdraw his Fly, as he ſhall find to be moſt convenient in his Angling. When he comes to deep Waters that ſtand ſomewhat ſtill, let him make his Line about two yards long, and dop his Fly behind a Buſh, at which Angling I have had very good ſport. The way to make the beſt Paſte, is to take a reaſonable quantity

of fresh Butter, as much fresh Sheeps Suet, a reasonable quantity of the strongest Cheese he can get, with the soft of an old stale white Loaf: let him beat all these in a Mortar, till they come to a perfect Paste; and when the Angler goes to his sport, let him put as much on his Hook as a green Pease.

The

The Nature, Uſe, and Benefit of Marle.

MArle is a very uſeful thing; the Nature of it is cold, which is the reaſon that it ſaddens the Land exceedingly; for it is very heavy, and will go downwards. Some Countries yield Marle of ſeveral colours, as 'tis affirmed of *Kent*, wherein is found both yellow and gray: the blew and red are counted beſt. To marle together, I hold not proper; but when you are reſolved to lay down your Land to graze, be ſure at the laſt Crop you intend to take (which may be two or three more after marling) then manure your Land, for the leſs binding, and the more light, looſe and open, the more fruitful it is, ſo that it will produce a gallant Clovery. The firſt year after you have laid it down upon the Wheat or mixed Corn-ſtubble, you muſt run it over again with Dung, and it will pay treble. Now the Lands upon which Marle is moſt natural for increaſe, is upon your higher ſandy Land, mixed of gravelly or any ſound Land whatſoever, though never ſo barren, to which it is natural and nouriſhing, as Bread to a mans Life.

The beſt way of planting of Trefoyl or Clover-graſs.

THere are ſeveral ſorts of Clover, I ſhall only ſpeak of the great Clover that we fetch from *Flanders*, called Trefoyl, named by *Cluſius Trefolio majus tertium*, which bears the great red Honey-ſuckle, whoſe root and branches far exceed our natural Meadow-Clover, and bears a very ſmall ſeed like Muſtard-ſeed, not ſo round, but longer like a Bean; the beſt is of a greeniſh yellow colour, ſome a little reddiſh; the black, I ſuppoſe, will not do well. Your Dutch or Low-Country ſeed, or from the lower parts of *Germany*, is very much of it, but very hazardous that comes over hither; but being well choſe there (for the choice is the Maſter-piece of the work) the tranſporting of it by Sea is no conſiderable prejudice to it; but much of it that was ſold in the Seedſmens Shops in *London*, was either corrupted by the Dutch before it came thence, or elſe parched by our drying, or elſe by the Shop-keepers either mingled with old or new, or keeping it another year, and then ſelling it for new. The beſt way of ſowing of this Dutch Seed, muſt be by mixture of it with Aſhes of Wood, or Coals courſly ſifted, or with ſome Duſt, or good Sand, or fine Mould, or any thing elſe

that

that will help to fill the Land, or ſpread well forth of the Land: and after this I muſt preſs as the weightieſt thing of this Husbandry, to have a moſt ſpecial care of the even ſowing of it, becauſe the wind, though very ſmall, hath power over this, and therefore you muſt chuſe as calm a time as poſſibly you can. You may ſow it upon any Land you intend to graze upon, any fair places in a Meadow, or Highways trodden and poached, it will ſoard them: but the uſual way is thus adviſed; when that you have fitted your Land by Tillage and good Husbandry, then ſow your Barley or Oats, and harrow them in, and after your Clover upon the ſame Land, covered over with ſmall Harrow or Buſh, but ſow not the Corn as you uſually did; but if you will loſe this Crop, you may ſow it of it ſelf. The ſeaſon of it is in the beginning of *April*, or in the end of *March*, if it be likely to be a dry ſeaſon. I have heard of three Crops, and ſome affirm that it will bear, two to cut, and one for to graze; the firſt Crop may be at mid-*May* ready to cut, and this Crop is beſt always to be cut green, and before the ſtalk begin to grow too big, and begin to dry and wither, unleſs it be for Seed; therefore as Experience will teach, it will be beſt to cut it green and young, and give it to Cattel or Horſe in the Stable; for if you cut it to keep, it will go ſo near to-

gether, as that it will do but little ſervice dry; yet if being cut young, it will be very good and ſweet, and either ſeed or give Milk abundantly; and then after the firſt cut, let it grow for Seed, and herein you muſt be careful, that you let it grow till it be full ripe, for it will not be very apt to ſhed; and if it grow to ſeed, I cannot conceive of what uſe thoſe ſtalks that are ſo hard and dry can be, unleſs it be for firing in a dear Country, ſo that the ſeed muſt be the advance of that Crop only, and ſo it may well enough, and you may have a good after-paſture, and may graze it until *January*, and then preſerve it. But if you would know when your Seed is ripe, obſerve theſe two Particulars. Firſt, obſerve the Huſk when the Seed appears in it, then about one month after it may be ripe. Secondly, try the Seed after it begins to turn the colour, and the ſtalk begins to dye and turn brown, it begins to ripen, and being turned to a yellowiſh colour, in a dry time mow it, and preſerve it till it be perfectly dry any manner of way, and then about the midſt of *March* thraſh it, and cleanſe it from the ſtraw as much as you can; foulter and beat the Huſk again, being exceeding well dryed in the Sun after the firſt thraſhing, and then get out what ſeed you can, and after try what a Mill will do at the reſt, as aforeſaid more at large: But I will give way to any that can

can make a better diſcovery. I need not preſcribe a time in *July* or *Auguſt* as beſt to cut for ſeed, becauſe ſome years and Lands will ripen it ſooner then others will; therefore have reſpect to thy ſeed and ſtraw according to the former directions: but when you are to go into good ſeed, you muſt graze it upon the Land, and then be ſure not to let it grow too rank and high; but if the ſtalk grow big, Cattel will balk it, and ſtain it more, and it will not eat up ſo kindly at firſt, nor graze ſo even afterwards, but exceeding much Milk it will yield, and feed and nouriſh very well. But to affirm, as ſome have done, and do confidently to this day, that it will grow on the barrenneſt Ground that is, as on *Windſor* Forreſt, I dare not; I have known that it hath failed, and I am confident muſt, without exceeding great coſt on Husbandry; yet that very Land well manured and tilled, dunged, limed, marled, or chalkt, or otherwiſe made fat and warm, will bring forth good Clover, and other rich Commodities, as they do in *Flanders*: the Nature of the Land is good, but the Spirit of it is too low to raiſe it of it ſelf. And this is all that is held forth in the Diſcourſe of *Brabant* Husbandry, exceeding barren Lands, but well dunged and tilled, and then clovered, not that it is the barren Land, but the good and coſtly Husbandry; only the old-

oldneſs of the Land, and the reſtineſs thereof, yields more ſpirit to the Grain or Clover by far, then the tillable Land well husbanded, and laid down with Clover, will do very well alſo. The quantity of ſeed for an Acre, as I conceive, will be a Gallon, or nine or ten pound, though ſome are of opinion leſs will ſerve turn. Therefore, as I ſaid before, I ſay your old Land, be it courſe or rich, as it is, or hath been diſuſed from Tillage long, is beſt for Corn, ſo alſo it is the beſt and moſt certain Land for Clover; and when you have corned your Land as much as you intend, then to alter it to Clover, is the propereſt ſeaſon. This I ſhall lay down for a general Rule, That whatſoever Land is neither too rank or fat for any ſort of Corn, is not too good to clover, and you ſhall always find it to be the beſt Husbandry, unleſs you recover the barren Lands up to a good and rich condition, which is alſo the far better Husbandry, then to let it lye pelting and moiling upon poor mean Land unfatned by ſome ſoils or other; therefore I adviſe every man to plow up no more then he can well overcome by his Purſe and Husbandry, and let the reſt lye till he have brought up the other, and then as he hath raiſed one part, take up another, and lay down that to graze, either with Clover or otherwiſe: and let him take heed that flatters himſelf to raiſe

good

good Clover upon barren Heathy Land, otherwiſe then aforeſaid. Let him take notice, he will pull down his Plumes after two or three years Experience, unleſs he deviſe a new way of Husbandry: as to the annual profit that may accrue thereby, I ſhall a little differ from the *Flanders* Husbandry, but ſhall affirm, that one Acre, after the Corn is cut, the very next year if it be well husbanded, and kind thick Clover, may be worth twenty Marks, or twenty pounds, and ſo downwards, as it degenerates weaker, leſs worth. In *Brabant* they ſpeak of keeping four Cows Winter and Summer, ſome cut and laid up for Fodder, others cut and eaten green; but I have credibly heard of ſome in *England*, that about one Acre have kept four Coach-horſes, and more all Summer long; but if he keep but two Cows, it is advantage enough upon ſuch Lands as never kept one: But I conceive beſt for us, until we come into a ſtock of Seed, to mow the firſt Crop in the midſt or end of *May*, and to lay that up for Hay, although it will go very near together; yet if it grow not too ſtrong, it will be exceeding good and rich, and feed any thing, and reſerve the next for Seed; and if we can bring it up to perfect Seed, if it but yield four Buſhels upon an Acre, it will amount to more then I ſpeak of by far, every Buſhel being worth three or four pound a Buſhel; and then after

after the Math or Eadiſh, that year may be put up three midling Runts upon an Acre, and feed them up: all which laid together, will make up an Improvement ſufficient; and yet this property it hath alſo, that after the three firſt years of cloving, it will ſo frame the Earth, that it will be very fit to corn again, which wil be a very great advantage. Firſt to corn the Land, which uſually yields a far better profit then graſing, and ſometimes a double profit, and ſometimes more, near a treble profit, and then to clover it again, will afford a wondrous ſtrange advance. And if you conſider one Acre with the Clover and Husbandry thereof, may ſtand you the firſt year in twenty Shillings, the Land being worth no more, which may produce you yearly (if it thrive well) eaſily five, ſix, or eight pounds *per* Acre, nay ſome will affirm, ten or twelve pounds, or more.

Of the Plantation of Hops, and how Land is improved thereby.

HOps is grown a National Commodity: But it was not many years ſince the famous City of *London* petitioned the Parliament of *England* againſt two Anuſancies or offenſive Commodities were likely to come into great uſe and eſteem, that was *Newcaſtle* Coal

in

in regard of their ſtench, &c. and Hops in regard that they would ſpoil the taſte of Drink, and endanger the peoples healths, and for ſome other reaſons I do not well remember: but petition they did to ſuppreſs them, and had the Parliament been no wiſer then they, we had been in a meaſure pined, and in a greater meaſure ſtarved. This Hop-plantation will require a large Diſcourſe; but I ſhall contract my ſelf to the briefeſt diſcovery thereof I can poſſibly. 1. Chuſe the Land that is beſt for them, and beſt Sets to plant withal. 2. The beſt manner of planting them and husbanding of them, until they are fit for ſale. 3. The profit and advantage that will accrue thereby, I ſhall afterwards, as plainly as I can, expreſs. 4. Deſcribe the manner of its growth thus; it comes up with ſeveral ſprouts like Aſparagus, runs up and climbs upon any thing it meets withal, bears a long ſtalk, hairy, and rugged Leaves, broad like the Vine, the flowers hang down by cluſters, ſet as it were with ſcales yellowiſh, called in High Dutch *Lupullus*, in Low Dutch *Hopſſem*, and in Engliſh *Hop*. It is offenſive upon this account, hot in the firſt degree, ſtuffs the head with the ſmell, therefore uſe it not too much; yet the Leaves open and cleanſe. The beſt Land is your richeſt Land, it muſt be a deep Mould, that which lyeth near the Rock, the Poles cannot be ſet deep

deep enough to ſtand firm; it ſhould be a mixt Earth that is compounded of Sand and a little Clay, but much ſolid Earth, a ſtrongiſh Land laid dry and warm, will bear the weightieſt Hops. A barren Mooriſh wet Soil is not natural to Hops; but if this be laid very dry, and made very rich with Dung and Soil, it may do reaſonable well. The Hop-Garden ſhould ſtand warm, that it may be preſerved from North and Eaſt winds, rather by Hills then Trees, as near your Houſe as may be, and that Land you determine for your Hop-Garden, lay as level and as ſquare as you can; and if it be rough and ſtiff, it will do well to be ſowed with Hemp, Beans, or Turneps before; but in what ſtate ſoever it be, till in the beginning of Winter, make uſe of the Plough or Spade, and this not only the year before, but every year as long as you uſe it; and the more pains and coſt you beſtow, the more profit, and is the nearer to you, reſemble the *Flemming* in his Hopping. And for your Sets and good Roots, to procure them, you muſt go to a Garden orderly kept, where the Hops are of a good kind, all yearly cut, and where the Hills are raiſed very high, for the Roots will be greateſt, be ſure to buy choice Sets; they may coſt ſix a hundred in ſome places, and ſometimes you may have them for the taking up: leave your Husbandry orderly, their Hills well dreſt.

dreſt. You muſt chuſe the biggeſt Roots you can find, ſuch as are three or four inches about, and the Set nine or ten inches long, and have three joynts in a Root. Take heed of wild Hops, they are only diſcerned by the Root and ſtalk. The unkindly Hop that likes not his ground, ſoil, or keeping, comes up green and ſmall in the ſtalk, thick and rough in the leaves like Nettles, much bitten with a black Fly, but it deſtroys not the Hop, but ſomewhat injures it. The manner of planting as ſoon as your Roots are got, is either to ſet them ſpeedily, or lay them in ſome Puddle, or bury them in Earth; but leave them not in Water above twenty four hours: Then begin to direct your Hills with a Line, tyed with knots and threads thereto; the due diſtance had need to be eight foot betwixt; becauſe then you make the fewer and bigger Hills, the Sun comes about them. Let the Poles reach not one another, that ſo it may be plowed yearly the more eaſily, otherwiſe it muſt be digged, ſome ſay ſeven foot, and others ſay ſix foot, as one lately accuſtomed manner is. And I am confident there is moſt advantage by thin planting: but that I leave to each mans Experience. Your hole under the knot of your Line, had need be a foot ſquare and deep, then if you can have the wind South or Weſt it is beſt; if not, go on, having made many

holes;

holes; but be ſure to take the month of *April* for the work, and take two or three of your Roots, as a great old Gardiner affirmed to me, by which they will yield green Sciens or white Buds, and will have ſmall beards growing out. Joyn your Sets together even in the tops, and ſet them altogether bolt upright, and there hold them in their place, till you have filled the hole with good Mould, and ſet low, but juſt as the tops may be level with the ground, and then after they muſt be covered thick with fine Mould; be careful you ſet not that end downwards which before grew upwards, which you may know by the bad growing upwards, and let no part of the dead ſtalk remain upon the uppermoſt joynt thereof; then preſs down the Earth hard to the Roots. Some will ſet them every one at a corner of the foot of the Line, which I rather incline to, becauſe they have room, and ſtand round: But if you plant late, and have green ſprings upon them, then be careful of not covering the ſpring; but to ſet more Plants, leſt ſome ſhould fail, and in a bigger hole, round about the ſame ſet eight, ſome ſay ten or more, which is thought tedious. Now at this time you need make no Hills at all there, as aforeſaid. Poultry muſt be kept from thence for ſcratching, the Gooſe more eſpecially, or any things that are miſchievous. Now for poling, if your diſtance be three yards,

yards, or eight foot, then four Poles are required, else three will serve, but I incline to six or seven foot distance, and four Poles, and as many this year as any. Elder Poles are very good, taper, and rough, and suitable to the Hops desire. The time of cutting your Poles is in *December* or in *November*, and then dress them, and pile them up dry; if you leave some Twigs, it will not do amiss. For length fifteen foot is well, except your Ground be very rich, or your Hills exceedingly heighten'd; or if they grow too thick, your Poles need to be the longer. The Hop never stocketh kindly, until it reach higher then the Pole, and returneth a yard or two; for whilst it is climbing, the branches that grow out of the principal stalk, grow little or nothing. Let your Poles be strong nine inches above the bottom, they will stand the faster: 150 Poles make a Load, which may be worth a little more then ordinary Wood, a few will supply the standing stock. In setting your Poles, lay all to each Hill you intend to set, which speeds the work When your Hops appear, as you discern where your principal Root stands, then set to poling, having a Crow of Iron to make entrance for the Pole: but if you stay longer, then you will be more subject, either by running or making holes, to bruise the Root, or else they will not so easily catch the Pole with-

out flying. Your foot of the Pole muſt be ſet a foot and a half deep, and within two or three inches of the principal Root: but if your Land be rocky, then you muſt help your ſelf by making your hill higher to ſtrengthen your Poles, for which you ſtay the longer; leſt that you bury your Sciens, your Poles of each hill, leave them rather outward one from another, and then with a Rammer ram them outward, and not inward. If a Pole ſhould break, take away the broken Pole, then tye the top of thoſe Hops to a new Pole, then winding it with the Sun a turn or two, ſet it in the hole; but if you take a ſtake, and tye it to without wreſting the Wyers of it, you may do well to piece it; but if it be broken at the nether end, ſhove the Pole in again; and if your Poles break in the pulling, or will not be drawn, by reaſon of the drought or hardneſs, you may make a pair of Pinſors of four or five foot long, with an Iron running Hook upon them, and with a Block laid under upon the top of the hill, and ſo coleweigh up your Poles, the mouth thereof made hollow. And for laying up your Poles, the uſual way is to tye two and two together in the top, being ſet in ſix oppoſite hills, and lay ſome Hop-bands upon the three hills under your Hop-poles, and ſo draw your tops near together, or farther off, as you ſee cauſe. When your Hops are grown two foot

foot high, bind up with a Rush or grass your binds to the Poles, winding them about the Poles as often as you can, and winde them according to the course of the Sun, but not when the dew is upon them: your Rushes lying in the Sun will grow tough. Now you must begin to make your hills, and for that purpose get a good strong Ho, of a good broad bit, and cut or ho up all the grass, in the Bowlers betwixt your hills, and therewith make your hills with a little of your Mould, but not with strong Weeds, and the more your hills are raised, the better, the larger and the stronger grows the Root, and the bigger will be your Fruit, and from this time you must be painful in raising your hills, and clearing your Ground from Weeds. In the first year suppress not one Scion, but suffer them all to climb up the Poles, and should you bury the Springs of any one of your Roots, it would dye, so that the more Poles are required to nourish the Spring. But after the first year, you must not suffer above two or three stalks to grow up to one Pole, but pull down and bury all the rest; yet you may let them grow four or five foot long, and then chuse out the best for use. As soon as your Pole is set, you may make a Circle how broad your hill shall be, and then hollow it, that it may receive the moisture; and not long after proceed to the

building of your hills. Where you begin, and where your Hops are higheſt, there begin again, and pare again, and lay them to your Hops, but lay the out-circle higheſt to receive moiſture, and be always paring up, and laying to the heap, and with ſome Mould until the heap comes to be near a yard high; but the firſt year make it not too high, and as you paſs through your Garden, have a forked Wand in your hand to help the Hops that hang not right. Now theſe hills muſt the next year be pulled down, and dreſſed again every year. Some, when their Hop is eleven or twelve foot, break off the tops, which are better then they which have their Pole ſo long as the Hop runs: But if that your Hop by the midſt of *July* attain not to the top of the Pole, then break off the top of the ſame Hop; for then the reſt of the time will nouriſh the branches, which otherwiſe will loſe all, it being no advantage in running up to the ſtock, or increaſe of the Hop. Now we come to the gathering of them; about St. *Margarets* Day Hops blow, and at *Lammas* they bell: But when your Hops begin to change colour, it is a little before *Michaelmas*, but long before ſome will turn, change, and grow ripe, which howſoever the beſt way will be to pull them, and not ſuffer them to ſhed; they are called Midſummer-Hops. Let them not grow till the other be ripe,

ripe, and as ſoon as the ſeed of the reſt begins to change, then get Pullers amain, and as many as you can, taking a fair ſeaſon; and note, you were better to gather them too early then too late. Therefore for neatneſs ſake, pull down four hills ſtanding together in the midſt of your Garden, cut the Roots, pare the ſame Plot level, throw water on it, tread it, ſweep it, and make it fat, wherein the Hops muſt lye to be pickt. Then begin and cut the ſtalks cloſe by the tops of the Hills, and cut them aſunder that grow one into another, with a long ſharp Hook, and with a Fork take them down; you may make them Fork and Hook, one apt Inſtrument with which you may ſhove off all from the Pole, and carry it to the place, and pick them off from the Pole. Straight fine Poles are beſt for this way, but cut no more ſtalks then you can carry away in the ſpace of one hour afore-hand; for either the Sun or Rain will offend them when they are off of the Pole, they muſt all ſtand round the floor, and ſpeedily ſtrip them in Baskets; for it is not unwholeſom, though ſome ſmaller Leaves fall amongſt them. Clear your floor twice a day, and ſweep it, and if the weather be unlike to be fair, they may be carried into the houſe in Blankets, but uſe no Linnen, it will be ſtained to the purpoſe. And if you pull them upon Poles, then lay them upon forked ſtakes, and

dispatch them, be careful of wet, lest they shed their seed, which is the marrow of them, and carry out your straw, and so depart your Garden till *March*, unless it be to bring in Dung. Lay on some in the Winter to comfort and warm the Roots, your old Dung is best, rather none then not rotten. And in *April* help every hill with a handful or two of good Earth when the Hop is wond upon the Pole; but in *March* you will find, unless it hath been tilled, all Weeds. But if you have pulled down your hills, and laid your Ground as it were level, it will serve to maintain your hills for a long time: but if you have not pulled down your hills, you shall with your Ho as it were undermine them round, till that you come near to the principal, and take the upper or younger Roots in your hand, discerning where the new Roots grow out of the old Sets, but cut no Roots before the beginning of *March* or end of *April*. The first year of dressing your Roots, you must cut away all such as grew the year before within an inch of the same, and every year after cut them as close to the old Roots. Those that grow downward are not to be cut, they are those that grow outward, which will incumber your Garden. The difference betwixt old and new easily appears: You will find your old Sets not increased in length, but a little in bigness,

neſs, and in few years all your Sets will be grown into one, and by the colour alſo, the main Root being red, the other white: But if this be not yearly done, then they will not be perceived; and if your Sets be ſmall, and placed in good Ground, and the hill well maintained, the new Roots will be greater then the old; if they grow to wild Hops, the ſtalk will wax red, pull them down, and plant new in their places. As for the annual charge of the Hop-Garden after it is planted, the dreſſing the Hills, the Allies, the heing them, the poling them, and tying to the Poles, and ordering the Hops, is uſually done for forty ſhillings an Acre, together with pulling, drying, and bagging by the day. And ſo I proceed to the drying of them, which may be upon any ordinary Kilne, with any Wood that is dry, but not too old, or elſe good ſweet Rye-ſtraw will do well, but Charcoal beſt of all. They muſt be laid about nine or ten inches thick, and dryed a good while on that ſide, and then turned upſide down, and dryed as much on the other ſide; about twelve hours will dry a Kilne full, which muſt be followed night and day, then laid up in a cloſe Room upon a heap together for a month, if your Markets will give you way to frume and forgive again: when the ſtalk begins to be brittle, and the leaf alſo begins to rub, then the Hop is dryed

ſufficiently, but tread them not while they are hot, it will tread them to duſt, and then either againſt *Sturbridge*-Fair, or what other Markets you provide for, you may bag them up cloſe and hard, either to 200 a Quarter. And ſo I come to my next Particular, to ſhew you the profit of them: One Acre of good Hops may poſſibly be worth at a good Market forty, fifty, ſixty pounds; an Acre may bear eleven or twelve hundred weight, poſſibly ſome have done more, many ten, but grant but eight hundred, they may ſometimes be worth not above one pound four ſhillings the hundred, and ſome other times they have been worth twelve or fourteen pound a hundred, and uſually once in three years they bring money enough. It is uſually a very good Commodity, and many times extraordinary, and our Nation may aſcribe unto it ſelf, to raiſe the beſt Hops of any other Nation. There's an old Saying:

——————*Hereſie and Beer*
Hopt into England *in one year.*

Of the Myſtery of Saffron, and the way of planting of it.

THere is another very rich Commodity wherein our Nation hath the Glory, and yet it is a very Myſtery to many Parts of it; they know not whether ſuch a thing grows in *England*;

England; and yet none such so good grows in the World beside that I have ever heard or read of, and that is Saffron. It is a most soveraign and wholesom thing, and if it take right, it is very advantagious and costly for price: It hath its ebbings and its flowings, as all other things have. I shall briefly give you the story of it: Good Land that is of the value of 20 *l.* an Acre, being well husbanded, tilled, and fitted, or worser Land being well manured, and brought to perfect Tillage, will serve the turn; but the better, the better for the work. The season is about Midsummer, when it is to be set, that being the season when they usually take up, or draw their Sets or Roots, and old store, when they may be had, and no time else. The Land being brought into perfect Tillage, the best way is to make a Tool like a Ho in operation, but as broad as six of them, and with that they draw their Land into ranges, open as it were a Furrow about two or three inches deep, and there place their Sets or Roots of Saffron about two or three inches asunder (which Roots are to be bought by the Strike, sometimes dearer, and sometimes cheaper, and are very like to Onions, an Onion about an inch and a half over) and as soon as they have made one Furrow all along their Land from one end to another, then they, after that it is set, begin in another, and draw that

that which they raiſe next to cover this, and ſo they make their Trench, and cover the other; they keep one depth as near as may be, which Ranges or Furrows are not above three or four inches diſtance, that ſo a Ho of two or three inches diſtance may go betwixt them to draw up the Weed, which being ſet and covered, it may come up that Summer, but it dies again; yet it lives all Winter, and grows green like Chives or ſmall Leeks. And in the beginning of Summer it dyeth wholly, as by the blade of it is as to appearance; let one come and take a Ho, and draw all over it, and cleanſe it very well, and then will come up the Flower without the Leaf. In *September* the Flower of it appears like Crocus that is blew, and in the middle of it come up two or three Chives which grow upright together, and the reſt of the Flower ſpreads broad, which Chives is the very Saffron, which you may take betwixt your fingers and hold it, and caſt away all the reſt of the Flower, and reſerve that only, and ſo they pick it, and they muſt pick it every morning early, or elſe it returns back into the body of it, to the Earth again, until the next morning, and ſo from one to another, for a months ſpace it will bear Saffron. You muſt get as many Pickers as may overcome it before it ſtrike in at the very nick in the morning. It will grow to bear a Crop,

and

and then it muſt be taken up, and planted new again, and then it will yield good ſtore of Sets to ſpare, which cannot be had any other way. It muſt be taken up at *Midſummer*, and then ſet as aforeſaid. And when that you have got your Saffron, then you muſt ſet it a drying, and that you muſt do, make a Kilne of Clay, not half ſo big as a Bee-hive, and very like it will be made with a few little ſticks and Clay, and ſerve excellently well for this ſervice. A little fire of Charcoal will ſerve to dry it, but it muſt be very carefully tended. Three pound of wet Saffron will make one of dry. An Acre of Land may bear fourteen or fifteen pounds of Saffron, if very good: but if ſeven or eight pounds, it will do the work, and one Acre of it will be managed with no great charge. I do not believe it can come to 4 *l.* an Acre, it hath been ſold from 20 *s.* a pound to 5 *l.* a pound. It is an excellent advantage, and brings in at worſt a ſaving bargain, but it may poſſibly be worth 30 or 40 *l.* an Acre; but if it come to 7 or 8 *l.* it loſeth not. The Saffron-Country is on one ſide and Nook of *Eſſex*, and ſome part of *Suffolk*, at *Saffron-Walden*, and betwixt that and *Cambridge* hath very much of it in their Common-fields: And truly theſe Lands are but of a middle worth. I have ſeen as rich Lands again in many Parts of *England*; but it is, as I believe,

Loamy

Loamy Ground, and of a little ſaddeſt Nature. It will require to be laid dry and ſound, and the Land it ſelf muſt be very ſound and wholeſom.

Of the Plantation of Liquoriſh at large.

I Proceed to another National Commodity, in the Plantation whereof we exceed all other Nations, and that is Liquoriſh, our Engliſh Liquoriſh, as we call it, being far beyond the Spaniſh Liquoriſh, or any other. The planting of it few underſtand, and fewer practiſe. That I may be open and full in the diſcovery of it, I ſhall under two or three Heads formalize what I intend to expreſs. 1. To diſcover the beſt Land to bear it. 2. The beſt way I can find practiſed to plant it. 3. The profits and advantages of it. The beſt Land to raiſe your Liquoriſh upon, is your richeſt you can get or make, your warmeſt you can find out, the ſoundeſt and the dryeſt that is poſſibly to be had, of a very deep ſoil; you muſt dig and prepare your Land before you ſet, and it muſt be digged three Spades deep, and two or three ſhovelings at the leaſt, laid as hollow and as light as may be: You muſt have it digg'd out of natural Land, if it be very rich Land indeed, that it will feed an Ox in a Summer; it is the beſt for eight pence a

Rod

Rod at *London*, forty Rods make a Rood, which is a quarter of an Acre, which comes to about 4 or 5 *l.* an Acre, and this is the main charge of all for three years, there is no more, unleſs it be a little hoing, which rids off of the hands very faſt; I believe it will not coſt above 20 *s.* an Acre more in all the three years, both in ſetting, and all the dreſſings of it, beſides the Sets and Land: the Sets being doubly trebly worth your money. Sets have been ſold for 2 *s.* the hundred; but if your Land be not freſh old Land, or extraordinary rich, and as rich as your beſt Gardens are, it muſt be made ſo with Soils and warm Manures. Horſe-dung is excellent to be intrenched into the Earth, it both warms and lightens it, and makes it fit for this ſervice. About *London* are very ſerviceable Lands for it, and ſo is any dry Soil whatſoever, where it is rich enough and deep; that which bears this well, will alſo bear your Moulder Weed, that rich Commodity. Having digged and prepared your Land, you may proceed to the planting of it, and therein you muſt endeavour to get the beſt Sets you can, and from the beſt and largeſt ſorts of Liquoriſh. The beſt Sets are your Crown-ſets or heads got from the very top of the Root a little ſhived down; be careful of this, of very ſound Land; for how ſoon ſoever you come to water, your Liquoriſh will

check

check and run not one inch further: and having procured your Sets, your Ground being caſt into Beds of four foot broad, all along your Plantation, from one end to another with a long Line, you may lay down a Set at every foot along the Line, which Line may have knots and threds at every foot, if you will be ſo exact, and then a man may come with a Tool made a little flattiſh, or roundiſh, of the bredth or bigneſs of a good Pickforks-tayl, about half a yard long, with a Crutch at the over-end, and ſharp at the nether, and that thruſt into the ground, it being made of Wood or Itch: but if flat, an Iron will do beſt, and open the hole well, and put in the Set, and cloſe a little Mould to it, and ſo you may overrun an Acre very quickly in the ſetting of it, and if it ſhould prove a very dry time, you muſt water your Sets two or three days at the firſt, until that you ſee that they have recovered their withered wanenes, and then the firſt year you may plant your Garden with Onions, Radiſhes, or any Sallet-herb, or any thing that roots not downward; and I am confident it would be better too, becauſe it will prevent ſome weeding, and for the ſecond, it muſt be hoed and kept from Weeds too, and a little the third; but one thing be very curious of, in the taking up, and ſudden ſetting of thy Sets, as ſoon as took up, ſet again: but

if

if you fetch from far, then as ſoon as taken up, put a little Mould, and poſte them away by Horſe-back, and get them into the ground as ſoon as poſſibly; the delay of ſetting ſpoils many thouſand Sets. The ſeaſons of planting is in the months of *February* and *March*: you may the ſecond year take ſome Sets from your own ſtock, but be very curious thereof: but the third year you may take what you pleaſe, and in the taking of the Liquoriſh up, the beſt ſeaſons for which is *November* and *December*, there will run from every Maſter-root a Runner which runs along the over-part of the ground, which hath little Sprouts and Roots, or Sciens, which will yield excellent Sets, if they be cut three or four of them in every Set, which may be about four or five inches long, which is alſo to be planted, and is as good as the Crown-ſet; alſo if it be any thing a moiſt time, you may take ſlips from the leaf or branches, and ſet them, and then ſome of them will grow; but they may be ſet betwixt the other to thicken, leſt they ſhould fall. The third Particular, is the profit and advantage that may be made thereby, which is very conſiderable; but it is alſo ſubject to the ebbings and flowings of the Market. It muſt be taken up in Winter, and muſt be ſold as ſoon as taken up, leſt it loſe the weight, which it muſt needs do: You may make of an Acre of in-

different

different Liquoriſh 50 or 60, Land of excellent good, 80, 90, or a 100 *l.* It is not of ſo great uſe as other Commodities are, and ſo will not vent off in great parcels, as others will, neither will it endure the keeping for a good Market, becauſe it will be ſo ſoon dry.

How good a Commodity Hemp is, with the manner of Planting of it.

HEmp is an excellent Commodity, and would be far better, but that it is not made ſo National. This Staple-commodity in the product would bring a conſtant profit for the ſtock, and would maintain the Poor at work, ſo as to get a competent livelihood. Why ſhould we run to *France*, to *Flande s*, and to the Low Countries for Thred and Cloth of ſo many ſorts, and fine Linnen, when we have Hemp and Flax enough of our own? I ſhall now proceed to a brief Deſcription of the way of raiſing it. As for the Seed of it, that is familiarly bought and ſold in all places in the ſeaſon; but the beſt Seed is your brighteſt, which you may try by rubbing of it in your hand; if it crumble with rubbing, it is bad; but if it ſtill retains its ſubſtance and colour, it is good. The beſt Land for it, is that which is ſandy, or a little gravelly, ſo it be very rich, and of a deep ſoil: As for your cold Clays,

Clays, they are not fit for it, the very best Land can be pickt for it is but good enough. The quantity that is to be sowed upon our Statute Acre, is three Strikes or Bushels, and harrowed with small Harrows, the which after the Land is made exceeding fine, as the finest Garden; then in the beginning or middle of *April*, is the time they sow it: some sow it not till the end of *April*: But if it be any thing a kindly year, the earlier the better, and so preserved exceeding choicely at first, for fear of Birds destroying of it, as you see in many Countries. Be careful that Cattel never bite it, nor lye upon it, for they will destroy it. The season of getting it, is first about *Lammas*, when a great part of it will be ripe, it may be about one half, that is, a lighter Summer-Hemp that bears no seed, and the stalk grows white and ripe, and most easily discernable, which is about that season to be pulled forth and dryed, and laid up for use, or watered and wrought up as all good Housewives know, which you must pull as neatly as you can from amongst all the rest, lest you break it; for what you break, you utterly destroy, and then you must let the other grow for seed until it be ripe, which will be about *Michaelmas*, or a little before: when seed and stalk are both full ripe, and you come to pull them, you bind up in bundles as much as a yard-hand will

hold, which is the Legal meaſure; but for your ſimple or Summer-Hemp, that is bound in leſſer bundles, as much as may be graſped in both your hands; and when your Winter-Hemp is pulled, you may ſtock it up, or barn it, any way to keep it dry, and then in the ſeaſon of the year, thraſh it, and get out the ſeed, but ſtill preſerve your Hemp till you ſet to the working of it, which inſtead of breaking and tawing of it, as they do in moſt parts, there they altogether peel it, and no more, and ſo ſell it in the rough: But I leave all at liberty for that, whether you peel or dreſs it up by Brake or Tewtaw. As for the Seed an Acre will bear, is two or three Quarters, and it is uſually ſold for about a Mark a Quarter, ſometimes ten ſhillings. If good Hemp, then ſtore of ſeed, elſe not; but in many and moſt Parts of the Nation, it is ſold for about four ſhillings a Buſhel: Your fimbled-Hemp is not worth above half ſo much as the other; ſometimes it is ſubject to Weeds, to Carlock, and Muckle-weed, which muſt be weeded; but the beſt way to deſtroy them, is to let your Hemp-Land lye one year fallow: I only ſpeak of *Holland*, the cheapeſt place for it, and the firſt fountain of it: But generally throughout the Nation, it is of far more worth and value. The richer your Land is, the thinner; the poorer, the thicker you muſt ſow. One Acre of good

good Hemp may be worth 5, 6, 7, or 8 *l.* an Acre, and ſold as ſoon as pulled or gathered; but if it be wrought up, it may come to 8, 9, 10, or 12 *l.* or more: it is a common thing in uſe, every one knows the manner of working it to Cloth.

The Husbanding of Flax ſo as to make it come up as much of the Improvement as we can.

FLax, as I may call it, is a Root, or roundation of advantage, upon the proſperity whereof, thouſands of people in good, honeſt, and laborious Callings, are maintained; for the profit accruing thereof, i both general and particular. For the Land capable of raiſing good Flax, is any ſound Land, be it in what Country ſoever it will, if the Land be good, either earthy, or mixed of Sand or Gravel, and old Land; it is beſt, that hath lain long unplowed, it had need come up to the value of a Mark, or near twenty ſhillings an Acre to ſow Flax upon, within a mile of *London*; and yet in moſt Counties of *England*, I know as good and as kind Land for that Husbandry, as any other; and at *London* they have Workmen dearer too, and yet can raiſe (though they give ſo dear) a very conſiderable profit. There is excellent Flax about *Maidſtone* in *Kent*, 'tis ſaid the beſt Thred in *England* is made of it;

one Acre of good Flax may maintain divers perſons to the compleating of it to perfect Cloth; conſider how many Trades are ſupplied thereby. 1. The Flax-Land muſt have the ſame Husbandry of plowing and ſowing, as Lands have for Corn; there's the Husbandmans buſineſs, ſometimes, yea many times weeding too, then pulling, ſtitching, and drying, then repelling, and laying up, and preſerving the ſeed, then watering is either on the ground or in the water, then drying of it up, howing of it, then breaking and towtawing of it, then better helling and dreſſing it up, then ſpinning of it to Yarn or Thred, then weaving it, and bleaching, and then it returns again to the good Houſwives uſe, or Sempſter, and then to the weaving and uſage; and all theſe a dozen good Callings. 2. For the carrying on of this deſign, and making the beſt of this Improvement, I will here give you the beſt and moſt profitable way of planting of it, that is diſcovered. As for the Land, let it be good, and well ploughed, both ſtraight and even, without balks, and in due ſeaſon, about the beginning of *March*, or latter end of *February*: and as for the Seed, the true Eaſt Country-ſeed is the beſt, although it coſt very dear, one Buſhel of it to ſow, is worth ten Buſhels of our own Country-ſeed; but the ſecond Crop of our own, of this Country-ſeed, is very good,

and

and the third indifferent, but then no more; but again to your beſt Seed: the quantity of it is about two Buſhels of it upon an Acre at leaſt, ſome ſow a Peck more; but I conceive two may be enough, but of our Seed it will require half a Strike more then of the Eaſt Country-ſeed: Our Flax-men in former days did not ſow above half ſo much, or little more; but now Experience hath brought us to this pitch. The ſeaſon of ſowing it, is a warm ſeaſon, in the latter end of *March*; but in the warmer parts, as *Eſſex* and *Kent*, I conceive mid-*March* may do well; but in colder parts, as down towards *Warwick-ſhire* and *Worceſter-ſhire*, the beginning of *April* may be early enough; and if there ſhould come a very wet ſeaſon, you muſt take care of weeding it alſo, that it grow not till it be over-ripe, leſt the ſtalk ſhould blacken or mildew; yet to its full ripeneſs you muſt let it grow, the which you may perceive, both by the hurle, and by the ſeed. Some will ripen earlier, and ſome later; but againſt it be ripe, be ſure to have your Pluckers to fall in hand with plucking of it, and then tye up every handful, and ſet them upright one againſt another, like a Tent, till they be perfectly dry, then get it all into the Barn. It is indifferent whether you ripple it, or take off the boles of it, as ſoon as you bring it home, or when you intend to uſe it.

As for your watering of it, whether in the Water or upon the Land, that I ſhall not peremptorily determine; but thus much I ſay, that both may do well, and he that gets ſtore, will find uſe of both, becauſe of the one you make uſe as ſoon as your Flax is pulled, and then you need not ſtand ſo curiouſly upon the drying of it; but after you have got your ſeed, you may water it, and the watering of it opens and breaks the hurle the beſt; but then you muſt be careful of laying up your ſeed, that it heat not, nor mould, and that which you water then, get it forth upon your Graſs-land, and ſpread it thin, and turn it to preſerve it from mildewing, and keep it ſo until you find the hurle be ready, and willing to part from the Core, and then dry it up, and get it in for uſe. And for the drying of it, a Kilne made on purpoſe is beſt, ſo that you be careful of ſcorching it, this will make a greater riddance of the ſame, and to them that have great ſtore, Sun-drying will never do the feat, though it may do well for a ſmall quantity, or the Flax of a private Family. As to the working of it, you muſt provide your Brakes and Tewtaws both, the one, that is, the Brake which bruiſes and toughens, the Hurle and the Tewtaw that cuts and divides out the Core; if you uſe the Tewtaw firſt, it may cut your well-dryed Flax to pieces; yet both do well, but uſe the Brake

firſt. It will coſt the Workmanſhip of it betwixt three or four pounds an Acre, to bring it up to Sale: It lyeth much upon the Workmans hand, and therefore far more to be advanced, by how much the more it raiſeth imployment for ſo many people to live by. Where Wages are great, it comes off the hardeſt; yet where it is carried on to the purpoſe, people ſtock hard that want Work, and becauſe of conſtancy, will work on eaſie terms, or elſe how could they poſſibly do good of it at *London*, or near about it, where they work at double Rates? but there I have ſeen the beſt Flax I ever ſaw. Laſtly, the benefit that may be made thereby, an Acre of good Flax may be worth upon the ground, if it be the Eaſt-Country-ſeed, ſeven or eight, yea, poſſibly ten or twelve pounds, yea, far more, the charge whereof, beſides the ſeed until it be ripe, may not be above ten ſhillings an Acre, which if you work up to be fit to ſell in the Market, it may riſe up to 15 or 16, or near 20 *l.* in the Market; but to bring it ſo high as 30 *l.* as in *Flanders*, I dare not ſay. But an Acre of our Country-ſeed, will hardly come up to above three pounds or four, unleſs very good indeed, to which if it amount unto, and no more upon the Land, it will make a good advancement of it, which it may be, Land, and Seed, and all Charges, may come to about fifteen or ſixteen

pounds an Acre, the ſeed not being worth above two ſhillings a Strike.

A Diſcovery of Rape and Coal-ſeeds Husbandry.

THe planting of Coal-ſeed, or Rape-ſeed, is another excellent good means for the Improvement of Land; this Coal-ſeed hath been of late days in good eſteem. And it is moſt eſpecially uſeful upon your Marſh-land, Fen-land, or upon your new recovered Sea-land, or any Lands that are very rank and fat, whether Arable or Paſture. The beſt ſeed is the biggeſt, the faireſt ſeed you can get, it being dry, and of a pure clear colour, of the colour of the beſt Onion-ſeed. It is to be had in many Parts of this Nation; but *Holland* is the Center of it, from thence uſually comes your good ſeed. The ſeaſon of ſowing it, is about *Midſummer*, you muſt have your Land plowed well, and laid even and fine, then you may ſow it, about a Gallon of ſeed will ſow an Acre, the which ſeed muſt be mingled, as afore was directed about the Clover, with ſomething, that you may ſow it even, and not upon heaps. The even ſowing of it is very difficult; it grows up exceedingly to great Leaves, but the benefit is made out of the ſeed eſpecially. You may ſow it either upon the Lay, Turfe,

or

or Arable, and both may do well; but your Arable must be very rich and fat, having made your Ground fine and fit to sow it. The time to cut it, is when half the seed begins to look brown, you must reap it as you do Wheat, and lay it upon little Yelms, two or three handfuls together till it be dry, and that very dry too, about a fortnight will dry it, it must not be turned or touched, if it be possible, for fear of shedding the seed, that being the chief profit of it; It must be gathered in sheets, or rather a great Ship sail Cloth, as big as four or six sheets, and so carried into the Barn erected on purpose, or that place on purpose designed to thrash it that day; you may have sixteen or eighteen men at a Floor, four men will thrash abundance in a day. I have heard that four men have thrashed thirty Coume in a day. The seed is usually worth 16*s.* a Coume, that is, four shillings a Bushel, sometimes more, and sometimes less. It will, if exceeding good, bear ten Coume upon one Acre, and raise a good advance upon your Lands. It is a Commodity will not want of Sale, the greater the Parcel is, the better price you will have. It is used to make the Rape-Oyl, as we call it. The Turnep-seed will grow amongst it, and it will make good Oyl also, you may sell a thousand pounds worth together to one Chapman: It is best to be planted by the

the Water, or near it. It cannot be too rank, the Eadiſh and Stubble will exceedingly nouriſh Sheep in Winter. It hath another excellent property, it will fit the Land ſo for corning, for Wheat it may produce a Crop as good, or better then it ſelf, and for Barley after it. The charge of the whole Crop, I conceive may come to betwixt 20 or 30 *s.* an Acre, and a good Crop may be worth 5, 6, 7, or 8 *l.* an Acre; the leaſt is a very good Improvement, becauſe it will do excellently well, if well ordered, and a kind ſeaſon upon the Land the very firſt year after recovery, when it will do nothing elſe, if it can be but plowed, when other things, as Corn and Grain may be hazarded.

Of Weld or Would, as ſome call it, or more properly Dyers-Weed.

IT is a rich Dyers Commodity, it beareth a long, narrow, greeniſh, yellow Flower, which runs to a ſmall Seed, far ſmaller then a Muſtard-ſeed, very thick ſet with ſeed. *Pliny* calls it *Lutea*, but *Virgil* calls it *Lutum*, and in our Engliſh, *Weld*, *Would*, or *Dyers-Weed*. It flouriſheth in *June* and *July*. In many places it groweth of it ſelf, in and about Villages and Towns, and is of a very great uſe, and conſidering the eaſie charge of the raiſing of it, and the

the hardneſs of the Land upon which it grows, is of incomparable advantage. For firſt it will grow upon very indifferent Land, not worth above ten Groats or half a Crown *per* Acre; yea, as ſome affirm, the verieſt hilly, barren, chalky, light Land, not worth twelve pence *per* Acre will carry it, and bear it to very good purpoſe; but unto ſo barren Lands, I will not give encouragement, unleſs where there is little or none better; but in any indifferent Land, ſo it be of a very dry, warm nature, it will do very well. And ſecondly, it will coſt but a little the managing, it requires no tillage at all, no harrowing, it being to be ſowed where you ſow your Barley or Oats upon that Husbandry, without any other addition, unleſs you draw a Buſh over it, or a Roul, either of which is ſufficient to cover it after you have ſowed it. The difficult piece in the managing hereof, is the very ſowing of it, that is, that it may be ſowed even; for the ſeed being ſo very ſmall, will require both skill and an even hand to ſcatter it: Some ſow it by taking it with one finger and the thumb; others with the two fore-fingers, but neither of theſe do I affect as the beſt way, becauſe they cannot ſpread ſo well as they may with their whole hand: I therefore preſcribe a mixture with Aſhes, Lime, fine Earth, or ſome ſuch thing as will beſt ſuit with the weight of the

the ſeed; for could you find out that which agreed both in weight and bigneſs, then out of all queſtion, none like to that to ſow it withal. A Gallon of this ſeed will ſow an Acre, which had need to every quart of ſeed to have two Gallons of ſome of the aforeſaid. It muſt be often ſtirred together, leſt that the ſeed ſink to the bottom, and ſow that part thicker then the other, and then caſt it out at Arms-end at as good an even a compaſs as you poſſibly can. This ſeed thus ſowed, may grow up amongſt the Corn, and yet be no prejudice, becauſe it groweth not faſt the firſt Summer; but after the Corn is cut, it muſt be preſerved. And the next Summer you ſhall receive through Gods Bleſſing a comfortable Crop: you muſt be exceedingly curious in the ripening of it; if you let it grow too long, your ſeed will fall out; if not long enough, your ſeed will not be perfect, nor your ſtalk neither, and therefore obſerve both the turning of the ſeed, and the ripening of the ſtalk; for I cannot tell you which of either will admit of a diſpenſation, and as ſoon as ever you perceive it to grow up to perfect ripeneſs, you muſt down with it, that is, pull it as you do your Flax up by the Roots, and bind it in little handfuls, and ſet it up to dry in little filches or ſtitch, until both ſeed and ſtalk be dry, and then carry it away carefully, as that

ſeed

ſeed be not loſt, lay it up dry, and ſo keep it as you ſee cauſe for a good Market; for it is to be ſold for the Dyers uſe, who ſometimes will give a very good price, but at all times ſufficient profit, and go far to buy it, from forty ſhillings an Acre, to twelve pounds an Acre, ſome ſay more; you may barn it up, and keep it, and the ſeed together until *March*, and then you may get out the ſeed by laſhing and whipping of it forth upon a Board or Door, which reſerve for ſeed: the ſeed is ſometimes ten ſhillings a Buſhel, and ſometimes more or leſs, as the Market riſes or falls, it coloureth the bright yellow, and the Lemmon-colour. The Stalk and Root are both uſeful, and muſt go together to the Dyer. The charges of ſowing, and all things till you come to pulling, is not above one ſhilling, whipping and banning may come to four ſhillings more; the ſeed may be worth half a Crown, ſo that all Charges and Rent of the Land may amount to leſs, but I will ſay fifteen ſhillings, then the Improvement will be fourfold; if worth four pound ten ſhillings an Acre, ſixfold; if worth ſix pound *per* Acre, eightfold, and much more, as ſome affirm to ſixteenfold Improvement. It begins well, and ſpreads and thrives very much in *Kent* in many parts thereof; the beſt place to get the ſeed is in *Kent* clean down to *Canterbury* and *Wye*, where you

you may ſee both the Land and the growth, and diſcover the Myſtery thereof. It is ſold by weight, ſo much a hundred, and ſo much a Tun weight.

Of Woad or Wadt, the Land beſt for it, the Uſage of it, and the Advantages thereby.

WOad is alſo a great Commodity, it lays the foundation for the ſolidity of many Colours more: A Woaded colour is free from ſtaining, excellent for holding its colour, nay, ſad-holding colour muſt be woaded. It hath been one of the greateſt Inrichments to the Maſters thereof, until our late Wars, of any Fruit the Land did bear. It is called *Glaſtum* or Garden-Woad, by the Italians called *Guedo*, in Spaniſh and in French *Paſtel*, in Dutch *Wert*, and in Engliſh *Woad* or *Wade*. It hath flat long Leaves like *Reben Rubrum*; the ſtalk is ſmall and tender, the Leaves are of a blewiſh green colour. The ſeed is like an Aſh-key or ſeed, but not ſo long, little blackiſh Tongues. The Root is white and ſimple. It is a very choice ſeed to grow and thrive well; it beareth a yellow Flower; and requires very rich Land, and very ſound and warm, ſo that very warm Earth, either a little gravelly, or elſe ſandiſh will do exceeding well; but the purer, warmer, ſolid Earth is beſt, and exceeding

ceeding rich Land, and though it ſhould be mixed with a little Clay, it will do well, but it muſt be very warm. There is not much Land fit for this deſign in many Countries, eſpecially your hardeſt Wood-land parts, you have in many of your great, deep, rich Paſture many Hills and Hills-ſides good Woad-Land, when the bottom-ground will do no ſervice; but your chiefeſt is your home Corſe, or leſſer Ground lying near, and bordering about the Towns. Your beſt and naturalleſt Parts in *England* for Woad, are ſome Parts of *Worceſter-ſhire*, *Warwick-ſhire*, Southward, *Oxford-ſhire*, *Gloceſter-ſhire*, *Northampton-ſhire*, *Leiceſter-ſhire*, ſome Parts of *Rutland*, *Bedford-ſhire*, and *Buckingham-ſhire*, and ſome other places here and there: All theſe Parts have ſome admirable Woad-land in them. The Land muſt be ſound, and at above twenty ſhillings an Acre to graze in at leaſt, or elſe it will not be worth the woading. And to plow and ſow Woad, it may be worth as much more as to graze, yea, ſometimes more, if it be extraordinary rich Soil, and Trading good. And whereas ſome write, that it undoeth the Land, I anſwer as I judge in my own Breaſt, that in regard it is ſo often cut, and groweth ſo thick, and is ſo often weeding, that it muſt needs do ſo, as I believe all Corn doth draw out ſome of the Spirit thereof; but no more

the

then other Grain, if it could be ſo oft cut to grow again. Thus much I can ſay of it, that it prepares the Land exceedingly for Corn, and doth abate of the ſtrength and ſuper-richneſs, or rankneſs therof, which Corn would not well endure; for I am ready to maintain, that the richeſt Land is not beſt for Corn: For though the one may overburden, and be ſo rank; yet the other may bear as much to the Strike, and for goodneſs your middle-land beareth the Bell away for Corn, in my opinion. To acquaint you with the uſe of Woad, I muſt do theſe three things. 1. Shew you how the Land muſt be prepared and ſowed. 2. Shew you how it muſt be ordered, when that the leaf muſt be cut, and how ordered after the cutting of it. 3. And laſtly, how it muſt be tempered and ſeaſoned to make the beſt Woad for uſe and profit: But before I proceed, I muſt inform you, that this Commodity is not to be played withal, as you may do with Liquoriſh and Saffron, &c. to make Experiments of a little parcel, but a man muſt of neceſſity ſet forth and forward ſo much ſtock, and land, and ſeed, as may keep one Mill or two at work to make it into perfect Woad. It is the doing of a great quantity, and carrying on a great ſtock that makes this work, and will carry it on to profit and credit: Some have as much under hand, as will work ſix or eight Mills.

Mills. The charge of it is exceeding great in the management of it, and as well it payeth for all charges, as any Commodity I know of. The Ground must be of old Land, as aforesaid, and a tender Turfe, and must be exceeding choicely plowed; if very hilly, they must be cast, and well cast, that you cast forth, lye not high to raise the Furrow: they usually plow outward, or cast all their Lands at the first plowing, and having broke the Ground with a Harrow, then they sow it, and sow about four Bushels or Strikes of an Acre, which done, then cover it, and harrow it very well and fine, and pick out the Clots, Turfes, and Stones, and lay it on the hollow places of the Ridge in heaps, as is the usual custom: But now I should rather chuse to take a little Cart with one Horse, and as the Boys and Children pick them up, cast them into the Cart, and carry them into some flank and hollow place, and lay them down to rot, or else mend some barren place, because they lose a good considerable part of Land, and so of Wood too, which otherwise might be as good as the rest, and is now, by reason of the times, not worth so much. The Land that is lost is very considerable, in regard it is so good of it self, and the stock so good and rich that is sowed upon it, that all even Ground had need be regained, that possibly may be. 2. I am to shew you

how it is to be husbanded, and when the Leaf muſt be cut, and how uſed, and how oft, &c. After the Land is ſowed, and that it begins to come up, as ſoon as any Weed appears, it muſt be weeded, yea, it may be twice weeded, or more, if it requires before it be ready to cut; but if it be ſpecial good, and come thick, and cover the Ground well, it will ask the leſs weeding: to them that are exerciſed in this ſame Service, and have their Work and Work-folks at command, they will have it weeded for eight pence an Acre, and ſometimes leſs: as ſoon as the Leaf is come to its full growth, which will be ſometimes ſooner, ſometimes later, as the year is dryer or moiſter, more fruitful or leſs, which when you perceive at the full ripeneſs, ſet to cutting of it off. As ſoon as ever it is cut, your Mills being prepared, and great Broad Fleaks, ſo many as may receive the Crop prepared, and planted upon Galleries or Stories made with Poles, Fir, Alder, or other Wood; your Mill is uſually known, a large Wheel both in height, and breadth, and weight doth beſt, it is a double Wheel, and the Tooth or Ribs that cut the Wood, are placed from one ſide of the Wheel to the other, very thick, wrought ſharp and keen at the edge, and as ſoon as the Woad is cut, and comes out of the field, it is to be put into the Mill, and ground one Kilne full after another

another as fast as may be; the juyce of the Leaf must be preserved in it, and not lost by any means, and when it is ground, it is to be made in balls round, about the bigness of a Ball, without any composition at all, and then presently laid one by one upon the Fleaks to dry, and as soon as dried, which will be sooner or later, as the season is, they are to be taken down, and laid together, and more put in their places: But because all the circumstances will be too tedious to discourse, and the work is no common work, and very many not well versed therein, I will rather advise you to get a Workman from the Woad-works, which can carry it on artifically, rather then to venture the experimenting of so great Work upon Words and Rules. Good Woad may yield in a plentiful year five, or possibly six Crops, yea, ordinarily four, and yet sometimes but three: but the Winter Crop is of good worth, excellent for Sheep, conceived good against the Rot, and also it will maintain them well, and it will contain them in good heart, and strengthen them till sowing time again. The time of sowing is in the beginning and end of *March*. And thus when you have cut all your Crops one after another till Autumn, the declining season will not ripen it again, and your Mill is at leisure, then you must proceed to the third Particular, which is to the ordering and

ſeaſoning of it, and working it up to uſe, which muſt be done in the manner following: You muſt ſet your Mills to work again, to grind it all over, and then ſeaſon it up, and ſo you may make it ſtronger or weaker, as you ſhall ſee occaſion. There is ſo much difference betwixt Woad and Woad, that the Dyers, though ſo experimental, will hardly buy you any parcel till they have experimented it in colouring; and therefore for me to preſcribe a Rule upon ſuch uncertainties, I hold it not ſafe, the Woad-man that uſes to make up three or four ſorts of Woad, will make it up as he intends to friend a Cuſtomer. The firſt years tryal will put you into ſufficient Experience: As the Woad yields many Crops, ſo each Crop is worſe then the other; the firſt Crop is beſt, the ſecond next, the third much worſe, the fourth far worſe then that, and the fifth worſt of all; if you get a fifth, but that is not uſual, four Crops is ſufficient, and ſometimes you muſt be content with three, and as the firſt Crop is uſually (in a good year) ripe by the midſt of *June*, ſo will the ſecond be uſually ripe in one month after that, and ſo every month, or thereabouts, each Crop will be ready, and if the latter end of the year prove kind, then you muſt expect a Crop the more. Now to know when the Woad is ripe, and to take it in the very ſeaſon, is a fundamental

piece,

piece, which is when the Leaf is come to a full growth, and retains its perfect colour and lively greenness, then with all your might set so many hands to cutting of it, as that it do not fade, or wax pale or wan, before you have cut your Crop; for then it will begin to be over-ripe, and the less sap and marrow of it drinks in again, and will not yield store of juyce, which is the spirit of it, and best of the Woad. The Woad-man seasons the two first Crops together, and some season the third by it self, and the fourth by it self, some put the three first Crops together, which makes the worser Woad, but the very Virgin-Woad is the first and second, and the better they desire to make it, the more intire they compound it, not confounding it with divers sorts. The manner of seasoning is thus; after every Crop is cut, grinded, balled, and dryed, as dry as possibly it can be, and laid up in the Ball every Crop by it self, then you must take the first and second Crops, and grind them all over again together, or apart, as you please, but they must be then wrought as dust, as it were, in the Mill, and ground very well the first and second Crop, or so much as you will make of your best sort of Woad, and so laid upon the floor in a heat or Couch, and then you must mix it with water, and turn it over, and mix it again, and turn it

oven, and give it ſo much water as that it will be ſoakt throughly, however you may over-ſoak and drown it, and that will be very prejudicial to it: It muſt be turned in the Couch once for three or four weeks together, and then every other day once for about a fortnight, and then twice a week, till it comes to a right colour. At the firſt many men muſt be imployed, carrying water as hard as they can, till it be wet and well ſoaked, and that you may know the better how to temper it aright, you ſhall find it heat exceedingly in the Couch, which you muſt look to keep in a moderate condition, which over-heating you may prevent with turning, that it over-heat not by any means; it may grow ſo hot, as you can poſſibly abide your hand in it, but not to exceed that heat: and how to know its ſeaſons kindly, and ſo will in time come to perfect rich Woad; you muſt obſerve that it will alter and change divers times: firſt it will hoar, mould, and froſt, and ſmell exceeding ſtrong, and then it will in a little time abate thereof, and grow towards a black colour, and then it will hoar and mould again, and change a little whitiſh, and after this ſecond change, it will come to a perfect black, which the brighter and clearer colour, the better. This muſt be the Winters work, and it will be good for cold weather, and when it is thus wrought,

and comes to its colour, then you may lay it up, or heap it up, to lye for a Sale, putting divers Poles into each heap to the bottom, to open and keep it cool, and you muſt be ſure it take not heat again; and thus all your ſorts of Woad muſt be ſeaſoned one after another, and eſpecially all ſuch that you can dry that Summer: but to tell you how to chuſe the beſt Woad, is ſcarce in the power of the Woadman, who can but gueſs at it from that Experience he hath in the mixing of it; but it muſt be tryed by the Dyers, who, as we ſaid, uſually do ſo before they buy it. I ſhall end with the advantages thereof, which are very great. And firſt it is National, in that it ſets many poor on work. It is the ſtaple and chief of the Dyers Trade, layeth a foundation for all enduring and holding Colours, and much advantages Land in the Rent, it doubles or more, and in the uſage of it upon this Husbandry, trebleth or quadrupleth it, and many times more: And then ſecondly, it is perſonally advantagious, the beſt Eſtates that have been got in all our rich upland Countries, have been got by it: at ſome ſeaſons, and when they have a right Crop and good Markets, it will amount to as much more; it hath been ſold from 20 to 30 *l.* the beſt Woad, and back again down to 6 *l.* a Tun.

The Nature, Uſe, and Advantage of Madder.

AND ſo I deſcend to my third Dyers Commodity, in relation to Dying or Colouring, and that is to the ſtory of Madder, that colours the rich and beſt ſolid red. It is now very rarely planted in Gardens, and in ſome ſmall Plots of Ground, and it amounts to the very great advantage of the Planters that ſet and ſell forth by the Roots they draw to vent to the Apothecaries, and medicinably to others; they make a moſt exceeding value of the Lands beyond all credence: ſome have made, as I have been informed, after the Rate of three hundred pounds an Acre in three years, for ſo long as it grows before it come unto perfection; and others that have ſold it by whole Sale a parcel together at the worſt advantage, to a hundred and ſixty pounds an Acre, and ſome have out of ſmall Plots of Gardens, made more then I have or will here affirm; and however this being a fundamental Fruit, and ſuch a one as that the plenty thereof will not much abate the Market, or dying Trade being ſupplyed here with from beyond the Seas, that the Erection of ſuch a Plantation as may bring it forth wrought up and fitted to the Dyers uſe, and ſo to be a ſupply to our ſelves within our ſelves. It would be

be a good deſign to the Nation, as it imploys ſo many hands to bring it to perfection. It turns Land to as great an advantage as any Seed or Root that is capable to receive it, and needs no more fear want of Markets for the venting of it, than we need for Wool that Staple-Commodity of the Nation. I ſhall proceed to the Deſcription of it. There is but one kind of Madder which is manured and ſet for uſe; but there are many things like thereto, as Gooſe-graſs, ſoft Cliver, Ladies-Bedſhaw, Woodroof, and Croſswort: all which are like to Madder-leaves, and are thought to be wild kinds thereof. It hath long ſtalks or trailing branches diſperſed upon the ground, rough, and full of joynts, and every joynt ſet with green and rough Leaves, in manner of a Star; the flowers grow at the top of the branches, of a faint yellow colour, after which comes the ſeed round and green: the Root creepeth far abroad within the upper Cruſt of the Earth, intangling one Root into another, and when it is green and freſh, the Root is of a reddiſh colour, it is ſmall and tender, but gathers and runs into the ground, juſt like an Ivy along a Houſe or Tree. It is a Commodity of much value, Patentees ſtrove hard for it, and Patents were gained about it in the late Kings days. For the making out of a good Plantation, I muſt obſerve theſe three things.

1. Shew

1. Shew you what it comes of, how to plant it and preserve it. 2. How to get it and use it, to bring it to saleable Madder. 3. The benefit and advantage of it will be National and Personal. Although it bear a seed, yet that seed comes not to perfection, it is therefore to be planted from the Sets that are to be got from the Madder it self, and they are to be bought in many Gardens in *London*, who keep up that Plantation for the advantage of selling their Sets, and Roots Physically to the Apothecaries only; all the skill is to distinguish of the goodness thereof: And for the discovery thereof, first know the season of getting or rather drawing them, which is in *March* and *April*, yea, as soon as they are sprung forth of the ground two or three inches long, then you must be careful to get Sets rooted; every Set having some suckers, or spinies of Root going out of them: they must be slipped from the main Root, and these Sets as soon as ever took up, put into some Basket with a little Mould, and posted to the place where they are to be set, the sooner, the better; and then your Ground being very rich, it cannot be too rich for this Commodity, however it must be of a warm and a very deep Soil, and digged two or three Spades graft depth, and two shovellings also, raked and laid even and level, and then by straight Lines trod out into long Beds

about

about one foot broad from one end of your Work unto the other, and ſet about one foot aſunder every way; and if it be a dry Spring, they muſt be kept with watering, until they recover their fading wane condition. You may begin to dig your Ground in the beginning, and along all Winter, till the very day of ſetting, and then you muſt keep it with weed and hoing, until it have got the maſterſhip of the Weeds, and then it being a Weed it ſelf, will deſtroy all others. One Rod of Ground is worth ſeven pence a Rod digging; or if very dry ſtrong Ground, eight pence, but ſix pence the beſt. You may ſow ſome early Sallet-herbs, as Radiſh or Onions, of ſuch things as will be ripe betimes, among it. The firſt year good weeding is the beſt preſervative unto it, and in your ſetting them by a little Line, one goeth before, and layeth every Set in his place, and another comes, and with a broad Dibble made for the purpoſe, thruſts down a deep and open hole, and puts in the Set, and for the nouriſhing of it, in caſe any dye, you muſt plant new in the room of it, for the time of the growing of it, until that it come to perfection, is three years: The firſt year you may take off ſome few Sets here and there, but that is ſomewhat dangerous; for that year, it muſt be kept with hoing a while alſo, then the ſecond year you may take up

Sets

Sets as faſt as you will, and almoſt as many as you will, leaving but as you do in the cropping of an Oak, the bough for the drawing up of the ſap out of the Root, being ſo thick and ſtrong in the ground, that nothing will almoſt decay it. If then you can get it for the uſe of the Drugſters and the Apothecaries, and the Sets to plant again; in the taking up of every Root, there will be one runner which hath little buds on it, which may be divided and cut into a fingers length, each planted with one bud out of the ground ſet upright, which makes very excellent good Sets, one Runner will make many Sets; but theſe Sets cannot be got up until the Madder be taken away: And having thus preſerved it until it come to a good Crop, having curiouſly dryed it as you do your Hops, to a juſt and perfect gage of drought. There is a Myſtery, that is, ſo pare off the huſks, that it may, if it be poſſible, as the Wheat is ground, be flaked, or flayed, that it may go all one way, which ſort they call the Mull-Madder, is little worth, not above nine or ten ſhillings a hundred; and then you muſt take out the ſecond ſort, called the number O, which is the middle Rind, and is not worth ſo much as the third ſort called the Crop-Madder, by one ſixth part, and this Crop-Madder is the very heart and pith of it inclining to yellow; this is leſſer in quantity, but little, better

better in quality by far. Sometimes the best Madder is worth 8 or 9 *l.* a hundred, and the number O is worth 6 *l.* 6 *s.* 8 *d.* Sometimes it is not worth above 4 or 5 *l.* a hundred. Some Dyers use of this Commodity above an hundred pound a week a man. Now as it is planted in Gardens, unspeakable advantages are made thereby, and should it hold a proportion when it comes to be made up, and compeared to the Dyers, it would prove the richest Commodity that I know sowed in *England*.

The

THE YOUNG GENTLEMANS Heroick Exercise;

OR THE

Perfection of Horſemanſhip, drawn from Nature, Art, and Practice of Riding.

BEfore I enter into the unfolding of the Parts of this Art, I do think it fit to ſhew the Natural Inſtinct and Temperature that ought to be in every perfect Rider. He muſt be a perſon void of fear; for the true properties of his fortitude ſhould be to guide his moſt noble Nature, through hard and difficult things, to the attaining of the end of his Heroick deſires, becauſe the perfection of every good undertaking conſiſteth in this, that it be done by a ſtaid and conſtant reaſon without raſhneſs. And becauſe every Rider is a reaſonable Creature, he therefore ought to be able

to

to yield a conſtant reaſon without any contradiction; as not ſubject to any prejudice of the Inquirer, for that he only teacheth by reaſon for what he doth, an inherent property peculiar to man; yet it cannot be truly ſaid, that every reaſonable man is a perfect Rider, becauſe every man hath not attained to the reaſon of the Art, and therefore unable to teach, *Nam quod nemo didicit, nemo docere poteſt*, for no man can teach what he hath not learned. And though it may be confeſſed, that every good beginning cometh unto us by Nature; yet the growth and progreſs thereof we attain unto by Precepts of Reaſon, and the accompliſhment by knowledge and practice: For Nature without knowledge is blind, knowledge without Nature falls ſhort, and Practice without the former is imperfect.

From hence it proceeds, that unleſs Nature, Art, and Practice be conjoyned, it will be impoſſible to be a good Rider, to be able to know how and when to help his Horſe, the only principal things required in a Rider that is inriched with Nature, Art, and Practice; and yet if he be ſo qualified, and beſtow all his labour and skill upon a Jade, let him aſſure himſelf he ſhall *Oleum & operam perdere*, but loſe his labour. For although every Horſe be a ſenſible Creature, moved by ſenſe and feeling, as things proper to his Nature, and taketh his

his inſtruction by Speech, as man inſtructeth man, which is either by incouragement, or cheriſhing him when he doth well, or by puniſhing him when he reſiſteth his Diſcipline; yet nevertheleſs when a Jade begins to be taught, and proceeds with a continual perſeverance therein, yet ſhall he never attain the perfection of Action, becauſe all Art muſt imitate the Nature of the Horſe, which to content and pleaſe, is the end of the whole Art: but where contrary Natures are, there of neceſſity muſt be contrary workings, and then muſt needs enſue contrary effects, for every Creature worketh according to its Nature. For amendment whereof, the ignorant and pretended Rider proceedeth to violence, which the Nature of the Horſe abhorreth, as a perturbation; for then his Riding becometh grievous and painful, ſo that he knoweth not what to do, no more then an unwardly Scholar by whipping to ſay his Leſſon delightfully; and were it granted, that the Horſe were of a good diſpoſition to yield all obedience to the moſt skilful Rider, yet ſhall he never attain to any perfection of Action, becauſe Nature hath not ſhaped nor given him aptneſs fit for ſuch a purpoſe, no more then a natural Fool by Education can attain unto true Wiſdom. And yet very few Riders neither have nor do truly judge hereof; for that nothing is more manifeſt

feſt in all their Writings and Actions, then proviſion and means to make perfect that which is moſt imperfect by Nature, as though they had never learned that Art can never overcome the neceſſity of Nature: wherefore I deſire all ſuch as wiſh and deſire to be good Riders, firſt to examine their own natural diſpoſitions. Secondly, to learn to know the true and perfect ſhape of Horſes. Thirdly, the natural Cauſes of their goodneſs and badneſs. Fourthly, to be taught by an underſtanding Maſter, and not to begin without his direction. Fifthly, to practiſe, and always to examine the reaſon of his Practice, then ſhall he ſee what a Hand-maid all Art is to Nature; then ſhall he diſcern in the beholding of the actions of the perfect ſhaped Horſe to be eaſie, quick, and ready according to his perfection of Nature, as true qualities bred and brought forth by Nature, not by correction, but with all mildneſs and gentleneſs voluntarily performed, the which all true and natural Riders will and ought altogether to cheriſh, ſeeing all Horſes do in that beautiful form, that he himſelf doth expreſs, when he deſires to appear moſt comely and juſt in his Pace, juſt in his Trot, juſt in his Gallop, juſt in his Carriere, juſt in his Head, juſt when he ſtandeth ſtill, juſt in union with the will of the Rider, his Head and Neck will be ſo juſtly and rightly

placed, of ſuch ſtaidneſs, and his Mouth of ſuch a ſweet and perfect compoſure, as it ſeems as if Nature ſtrove to ſet forth her own glory: All which ſome call Natural, and not ſo much Accidental in a perfect and a true ſhaped Horſe.

It remaineth now to diſcourſe of thoſe things which moſt principally are required by the Art for the true performance of ſuch Actions, as Art requireth either for helps, corrections, or cheriſhings, for reducing the Horſe to perfect Action, fit for the moſt gentile uſe of man.

For he that knoweth how to correct and cheriſh a Horſe in his due time, is, and ſo ought to be accounted, the moſt grounded in this Art, the which cannot in a ſmall time either be attained or performed; and therefore for the true attaining thereof, I wiſh that none undertake the ſame, as I ſaid before, but by the direction of an expert Maſter, leſt it be ſaid to him, as *Timotheus* the beſt Player on the Flute of his time, who when that he took a Scholar, uſed to demand of him, Whether he had made an entrance into that Play; which if he had, he took a greater reward by half, then he did of them that knew nothing, ſaying, That his pains were greater to take from him what was unskilfully taught him, then in teaching that which was good to ſuch as underſtood nothing at all thereof. The things

that

that are principally to be uſed for helps, are, as hath been ſaid, corrections and cheriſhings, which may be contained in theſe three Heads, *viz.* the Voice, the Hand, and the Leg; becauſe the Voice by words of Art helpeth, and with mild, meek, and gentle words cheriſheth, but by loud and taunting terrifieth and correcteth. The Hand (being the Inſtrument of Inſtruments) upon the true uſe whereof the ground of the Art reſteth, by the temperate and ſweet ſtay thereof, it helpeth: by clawing, or gentle putting the Horſe, it cheriſheth, and by correcting or ſtriking, frighteth. Again, the Hand by the ſtroke, jerk or ſound of a Rod or Wand, is ſometimes very uſeful, it often helpeth by practiſing mildly and gently with it, clawing and ſcratching the Horſe, it incourageth and cheriſheth him; but by ſtriking him too hard, correcteth to his diſpleaſure. Again, the hand with a Bridle in ſlacking it, eaſeth and cheriſheth him, and by drawing it hard, oppreſſeth and correcteth him, by the guiding thereof, it governeth a Horſe, as a Stern doth a Ship, which in all motions and actions anſwereth to that motion which the hand moveth. The Leg, when it gently provoketh with the Calf, helpeth; the Spur alſo by gentle means helpeth, and when there is a juſt occaſion by hard ſtrokes correcteth;

ſteth; ſo as to bring a Horſe to true obedience and perfection of action, he is to be corrected, helped, and cheriſhed; he is to be directed or helped, to the end he ſhould not erre, therein is great knowledge required: he is chearfully to be cheriſhed for his well doing, to accompliſh which knowledge, Reaſon and Experience are required, whereby appeareth how every good Rider ought to be qualified; of which, namely, the Voice, the Hand, and the Leg. Before I come to ſpeak of Action, wherein the true underſtanding hereof is moſt proper, I do propoſe to give a little further Inſtruction, and firſt of the Voice. When you mind to help your Horſe therewith, it muſt be with a moſt mild and chearful one, as to ſay, Hey, Hey, Hola, Hola, ſo Boyſo, Hup, Hup, enough, enough, no more; and many ſuch like: but a correction is clean contrary, which is with a terrible thundering Voice, as Villain, Traitor, and many ſuch like, whereas we in cheriſhing, the moſt mild and ſweet Voice is uſed, as my good Boy, ſo my good Boy, with an inclination of bending your body to him, and ſuch like incouragements; ſo as alſo the ſound of the Voice is to be uſed, as well as a Voice pronounced, by giving a Chirk with the Tongue, which may be called Clacking, in pronouncing whereof, the tip of the Tongue ſtriketh the roof of the mouth, as it doth in making

making the ſuppoſed ſound drawing neat the Greek word *Clognus*, and ſo alſo there is another ſound of the Voice to be uſed, as Hay, Hay. The next is the Hand, which, as I ſaid, is the Inſtrument of Inſtruments, in the true uſe and government whereof, is the ground of the whole Art; and as for the Bridle and the Rod, they are but dead and ſenſeleſs Inſtruments, without all uſe, when they are not appointed for the right uſe, of the temperate and ſteddy hand bearing up a firm moderate ſtay, neither too much ſlacking, nor too much drawing in; every good Horſe cauſeth a true and a juſt rain, a juſt bearing, a juſt ſtaidneſs, with a light and ſweet mouth in all actions: ſo as whatſoever the Horſe doth, is both eaſie, ready, and perfect, and being done with delight, muſt of neceſſity be beſt done, becauſe it beſt pleaſeth both Man and Horſe, neither of them being moved to any perturbation, grief, or pain: And as for the Rod and Wand, being Inſtruments only for the hand, how and when they are to be handled, offered, uſed, or not uſed. And for the Bridle which the Italians properly call *Il Manico del Timone*, the handle of the Stern: we ſhall for the preſent paſs them by.

The third thing is the Leg, wherein the uſe of the Calves of the Legs, the Heels, the Stirrup, and the Spur are to be handled. I ſhall,

to avoid repetition and all manner of tediouſneſs, refer them alſo to their proper place. And I ſhall for the preſent divide this our immediate Concernment into certain preſcript general Grounds or Rules, to follow which, the Rider ſhall find of daily uſe in teaching the whole Art to his Scholars and Horſe.

Firſt, when the expert Rider beginneth to teach a young Scholar, let him follow the Order of the diſcreet Schoolmaſter, that teacheth Children to write, who inviteth them with his gentle uſage to the Pen, Paper, and Ink, and in a moſt mild and civil manner, teacheth them how to uſe their arms and hands, and how to hold their Pens; and then how to make the firſt Letter, the which when the Scholars attempt, though it be very bad; yet in reſpect of the infancy of their knowledge, and willing minds to do better, they are not only commended, but rewarded for doing ſo; the Scholars being thus encouraged, deſire to go on to be taught to make many Letters, and then after in a gentle and ſlow manner, he teacheth them perfectly how to joyn their Letters. Even ſo ſhould your Scholars be taught in Riding, and young Horſes in their beginning to be taught, whereby all their actions might bring delight and admiration to their Beholders. For mild teaching, ſlow, teaching not too much; for a Horſe may be

wearied

wearied with too long teaching at one time, but giving him often breath, high keeping in courage, often rewarding, cherishing, great familiarity, no change of the Rider till he be perfect, no change of Bit, no rough Bit, no cutting or galling of his Nose or Mouth, but gentle feeling, no beating or whipping, no violence, no passion, but with all manner of Natures delight, maketh the Horses actions more then wonderful, because Nature hath a natural love to it self, and an innate hatred to all things that are enemies to the same, which is plainly testified by that natural Sympathy and Antipathy, which may be observed in all Creatures, as the Lamb which never had Experience of the Wolves cruelty; yet at the first sight of him, doth tremble and flye for fear.

CHAP. II.

Of Correction.

SEcondly, that the Rider never doth correct his Horse, but when gentle means and cherishing will not prevail; for no doubt but that he will willingly yield by gentle means, if it be sensible to him, what, how, and when to do; but that Horse that will not be moved by gentle means, let the Rider assure himself he

is of a bad Nature: But if any thing ſhall happen wherein of neceſſity Correction is to be uſed, then let *Solomons* direction be followed, who, as he was the wiſeſt man that ever was, or ſhall be, ſo did he keep more Horſes then any King, that Hiſtory mentioneth, who ſaith, That an untamed Horſe becometh fierce: but if he offend, in the inſtant time that he erreth, correct him; wherein how many do offend, all mens Eyes are witneſſes, beholding the common Horſe-breakers and ignorant Riders to miniſter horrible and moſt violent Corrections, when the Beholder cannot ſo much as ſee a cauſe, nor himſelf expreſs a reaſon, but errour evermore taketh that for truth which is falſe: So as it plainly appeareth, that when a Horſe hath been taught, and yet notwithſtanding erreth in his Diſcipline, that he hath been truly taught, *Solomon* would have him in that inſtant time puniſhed for that errour, but not to correct him for ignorance, which renders the Rider either to be mad or as ignorant as a Horſe.

CHAP.

CHAP. III.

That Teaching is not fit for ſuch Horſes as Nature hath not framed fit to be taught.

THirdly, that all Riders loſe no time in teaching of good Horſes; but as for thoſe Club-headed, diſtorted, ugly-countenanced, fleſhie, Gourdy-limbed, ſhort, thick-necked, low fore-parted, narrow, ſhallow-breaſted, and evil-ſhaped Jades and Roiles, turn them either to the Carts, Car-men, or *Paris*-Garden Stable: For in every particular Nature (that is the temperature of the Elements in every particular body without all contradiction) cauſeth and maintaineth the particular actions of the body wherein it is: and that ſuch ſhaped Horſes were never compounded or framed of a true temperature of the Elements, and therefore impoſſible to be reduced to the perfection of action, otherwiſe then by abuſe and great force, which Nature abhorreth. And that is but for a ſmall time, ſuch Carrions as theſe made uſe of alſo, do ſhadow the Glory of the Kingdom, diſparage the Judgment thereof, diſcourage many Noble and Heroick Gentlemen, either to become Breeders, Riders, or Maintainers of Horſes; and laſtly caſt miſts over the perfections of our Engliſh Riders.

CHAP.

CHAP. IV.

Of the Engliſh Bridle, Saddle, and bringing of the Horſe to the Block, the mounting and ſeat of the Rider, and of the Execution of the Action of teaching of the Art.

WHen the Horſe is made gentle, familiar, and fit for the Rider to teach, put on a Head-ſtall or a Canetſane over his Noſe, with a pair of ſtrong Rains, but ſo looſe and eaſie for his Noſe, as may neither hurt nor abate of his courage, or his quick and freſh feeling; and in a moſt gentle manner ſet a Saddle upon him, with an upright ſhort Pommel, ſo as that the true uſe of the hand may not be hindered or injured, the Bolſters whereof ſhould be broad in the top to incloſe the Thigh, and yet to bear ſo ſlope, that the Knee be not pinched, nor the Thigh kept from the true reſting place, the Seat whereof ſhould be of a reaſonable length and largeneſs, the Bolſters behind bearing forward to incloſe and ſupport the Thigh to the former Bolſters; the Strapper thereof broad and very ſtrong, with broad Girthes, and with very ſtrong and broad Buckles croſs-girded, ſo as that the Saddle may reſt firm on his Back, whereby the Seat will be eaſie, ſure, and certain, without motion,

tion, leaving the near Stirrup-leather almoſt half a hole longer, than the right Stirrup; and although that the Horſe be gentle, yet becauſe he hath a new Maſter and Rider not known unto him, being neither aſſured of himſelf, nor of that his Rider would have him do, ſo as that it may be truly ſaid, that he is not himſelf, but that he is troubled in mind: Therefore to keep him from fear and perturbation, I would have a quiet and ſtaid Horſe alſo ſaddled to be rid before him, and then bring them both to the Block; but the old Horſe firſt, and then the Colt, at which time let the Rider uſe all the mild and gentle words to the young Horſe, making the Rains of the Bridle even and juſt, holding them in his left hand not ſtiff, nor altogether remiſs or looſe; and as ſoon as he is mounted on his Back, let him ſet quietly there a while, leſt any ſudden motion ſhould breed any perturbation in the Horſe, and until the Rider have ſetled himſelf in the Saddle, his Noſe directly anſwering the Horſes fore-top, betwixt his Ears, his Legs hanging ſtraight down, neither thruſting down the Toe, nor lifting up the Heel, but with his foot with ſuch evenneſs in the Stirrup, as if he ſtood upon the ground, the Stirrup-leathers rather ſhort then long, winding his Toes ſomewhat nearer to the Horſes ſide, then the Heel, holding the Rains even and juſt with his

Creſt,

Creſt, even with the point of the Withers, a little above the Main, with his Thighs and Knees cloſe to the Saddle, and his feet reſting in the Stirrup in due place, not too far thruſt into the Stirrup, with an upright and ſtraight body, his Ridge-bone anſwering the Ridge-bone of the Horſe, ſo as the Horſe and Rider may ever ſeem to be of one body in all motions; during which time, let the Rider claw the Horſe with his hand, to remove from him all fear or hard conceit of his Riding: that done, let him go forward to paces fair and ſoftly, and ſtay again, making much of him, and ſo pace ſoftly and quietly to the place where the Rider intendeth to tread out a Ring; all which muſt be done by the Rider boldly and without fear, and as he muſt be thus uſed in going forward, ſo muſt he be uſed in treading and pacing out of the Ring in ſome new-plowed Ground, that is moſt deep of Mould, where firſt let the old Horſe enter betwixt two Furrows, ſo far as the Rider may have ſpace enough and Mould enough, and follow with the young Horſe cloſe to him, which will cauſe him the more willingly to go, becauſe he is directed and guided by the old Horſe, by which means he ſhall not be any way diſcouraged: then let the old Horſe (the young Horſe following) enter on the right hand, overthwart the Furrows, and tread out

twice

twice together a round Ring, containing in circuit about 30 paces, and being come about the ſecond time where he began, let him tread out the like Ring on the left hand, and after he hath gone twice about, let him begin again on the left hand, and ſo continue until he have gone four times together about the left Ring, and the right ſix times; that done, let him go fair and ſoftly out of the Furrow where he began, about 30 or 40 paces, and there ſtand ſtill, keeping his head and his body right in the path, remembring always to have ſome go by, to ſignifie his true performance, and to help, if need be; and then let him go very gently back from the place he came, and there let the Rider alight, and make much of him, by coying him, and giving him a little Graſs, Hay, or Bread in his mouth, to procure and win Love: and thus let him be uſed two days with a Horſe before him, and after him. Let him then lead and begin himſelf, to tread and pace the Ring in this gentle manner, for the ſpace of ten days, keeping a temperate, ſtaid, and fine hand upon the Rains, with a ſweet feeling ſtay, carrying his Forehead as Ram's do when they go to fight, whereby he ſhall not only rein well, but bear his head ſtaid and light; and when that he knoweth what to do, and that for the ſame he is always cheriſhed, he will ſtrive to do it faſter: Through the Riders

Riders continual keeping of his hand ſteddy, the Horſe will do it with a wonderful pride and delight, by giving him liberty; but a too haſty treating of the Horſe, will work the clean contrary.

In the pacing of the Ring, the Rider muſt not carry any over-hard hand, to dull the ſenſe; but ſo temperately, that the feeling may be always freſh, otherwiſe by the violent, by much galling his Noſe, whereof he would willingly have eaſe; to avoid the ſame, he will ſet his Head and his Neck awry, the true uſe whereof is that ſtanding in the Furrow juſt and ſtraight with his body, the Rider moves him gently to go forwards, and in the very motion, turns him on the right hand, by drawing very ſoftly the right Rain ſhorter with his right hand, lower under the Pommel of the Saddle, whereunto if he yield (as no doubt but he will) eſpecially having trod the ſame before, let the Rider preſently make much of him, neither drawing nor ſlacking the Rain: at which time, for his doing both for the eaſe of the Rider and the Horſe, if need ſhall be, let ſome skilful perſon (but his Keeper were moſt fit) come on his right ſide to his fore-ſhoulder, and thruſt him in by little and little, and the Rider alſo by the Calf of the right Leg, and the Clack of his Tongue to be a help to make him go forward, if the Horſe be

ſuch

ſuch a one as I have deſcribed, he will do it; but if he ſhould not in the very motion of the turn, then let the Rider draw the Rain with his hand, as before, whether it be on the right hand or on the left: all which muſt (as hath been ſaid) be done by gentle dealing, ſo as that the Horſe may hope for reſt and quietneſs, whereby he will be ready to do whatſoever his Rider will: But if he be a rammage Jade (as I ſaid before) and of an evil diſpoſition of Nature, for my own part I eſteem him not of any worth, not fit to be kept. Having ſpoken of Pacing of the Horſe in the Ring, it followeth, that after the ten days are expired, the Horſe be taught to trot the Ring, which he muſt begin in a ſlow and gentle Trot, as he was in the firſt beginning of pacing, increaſe his Ring-turns by two and two every day, until he make ten turns for the left Ring, and twelve for the right, which will augment his ſwiftneſs, whereof he ſhould be reſtrained until he be moſt perfect, and then he will do it with the greateſt grace and pride that may be imagined, which is the true property and quality of all Art, evermore to affect and effect to perfection; during which time of the beginning of Trotting, he muſt not be ridden with a Wand, nor wear any Bit, until he be moſt perfect in his Trot, ſtop and turn well on both hands, and not by any means ſuffered to gallop,

lop, until that he can alſo perfectly advance. By taking this courſe he will be juſt in his pace, juſt in his trot, with a ſtaid hand and neck, being the chief luſtre and goodneſs that Nature and Art affordeth.

Wherefore when you begin to trot the Ring, be ſure that at the firſt he be moved thereunto, as gently and quietly as you can deviſe, and ſo every action whatſoever, upon a reſtrained, temperate, and firm hand, with a ſweet Stay, and with a true Rain, that is, that his Noſe be juſt under his Forehead, neither too much out, nor too much in, which is the juſt placing and ſetling of his head, which will make him to have a pleaſant mouth, when he cometh to wear the Bit, in which conſiſteth the chief point of Horſemanſhip, becauſe he is ſo to be maintained in all his actions, the which is moſt eaſie to be done, and to be continued, if the Horſe be of perfect ſhape and ſpirit; but if he ſhould make reſiſtance, for that he is either rammage or evil broken, then trot him ſwiftly with quickneſs of Voice, Rod, and Spur; for the time of his trotting is the fitteſt time to make him forget his toys, and to attend his way; and if all this will not help, then ſpare not to gallop him; and if this fails, then be ſure he will be a Jade from the beginning to the end; for a Horſe of a good temper and perfect ſhape, can never be of ſo bad a nature and quality.

I ſhall now next diſcourſe, how to make the Rider perfect in ſtop, after he hath ended the number of his Ring-turns, which is to trot his Horſe right out in the middle Furrow betwixt the Rings, until that he come to the place of ſtop, and there to make a pretty ſtay, keeping his body right in the path, wherein if his whole body or any part ſtand overthwart, ſeek not at firſt through your too much paſſion to correct him for the ſame; but let a Foot-man direct him to ſtand right in the path, as we ſaid before, by thruſting in that part that ſtandeth out of order, or that he may cauſe the Horſe to go further in the ſame path, and ſtop him, holding that Rain ſtraighter on that ſide, whereon he moſt forceth his head, then afterwards the other, which will inforce him to keep right; which when he yieldeth, ever cheriſh him, and after it will be good to trot and ſtop him on a ground that is a little ſteepy, which ſomething falleth, and immediately riſeth: but when he is perfect, then he may do it on a ground that is very ſteep: But to teach him to go back, the Rider muſt (as I have ſaid) keep a firm ſtaid hand upon him with ſome liberty, and then gently ſtriking him on the Neck with his Rod, in that inſtant of time ſay, Back, Back: but if he refuſe, let a Foot-man with his Rod gently ſtrike him on the Knees, and ſo by the gentle pulling in of

his hand, and fair means, win him, and when he yieldeth, cheriſh him.

Having ſhewed how to ride a Horſe without a Wand, Bit, or Spur, I will now ſhew the Rider how to manage all three, together with the true uſe of the hand upon the Bit, one of the chief and only principal points of Horſemanſhip. Firſt therefore, when he rides with a Wand, let him take it very warily, that the Horſe be not frighted therewith, and to aſcertain the Horſe thereof, preſently after he hath received it, toy and ſcratch him about the neck with the end thereof, and for the carrying of it, it muſt be carried in the right hand, with the point upright, and when that he muſt uſe it, let the point fall cloſe unto him, as occaſion ſhall require; but in his management of it, let him lay his hand upon his right Thigh, and and his hand croſs the Horſes Neck, and when he is almoſt ready to turn on the left hand, let him lift up his hand and Rod, and hold the point right forth on the right ſide againſt his Eye, and as he changeth turns, ſo let him change his Rod on the one ſide and on the other: but if his Horſe will not turn on the ſide he would have him, let him ſtrike him on the contrary ſide; and when he is any way diſordered, let him carry his Wand on the contrary ſide; and when he would have him carry his fore-part right, ſtrike him gently on the

the ſhoulder or fore-legs, and when he would have him lighten behind, ſtrike him on the Rump and Hanches: and thus much for the uſe of the Wand, as occaſion ſhall ſerve.

Now for the uſe of the Bit, which is an Inſtrument only guided and directed by the hand, and becauſe the ground of the Art of Riding dependeth only upon the right uſe and true government of the hand, being guided by reaſon and diſcourſe, ſo as the Horſe in all motions and actions, is, and ought to anſwer to that motion.

Firſt therefore, let the Bit that he firſt bit his Horſe withal, be gentle and pleaſant; yet ſo that the gentleneſs cauſe him not to deſpiſe the Rider, nor the hardneſs drive him to deſpair; for you muſt underſtand, that knowledge always preſuppoſeth reaſon, and reaſon ſenſe, and ſenſe reaſon: all which conſiſt in a true mediocrity, and therefore amongſt the moſt learned Precepts that were written in the Temple of *Apollo* in Greek, this was in the ſecond place, Nothing too much.

For if he preſs him with the Bridle, if he carry his head well, yet muſt he preſently eaſe his Bridle-hand, and make much of him, becauſe he ſheweth himſelf obedient to him; and whenſoever he doth any thing well, and with delight, the Rider muſt be very careful not to vex him, but ever ſo to win him, that he may

be willing to pleaſe him. So likewiſe when he bears a firm hand with a ſtay, that thereby the Horſe doth bring in his head, and yield to his hand; yet he muſt ſhorten the Rains of his Bridle, till his head be ſetled in its due place, that is, as hath been ſaid, neither to carry his head too much out, nor too much in, & ſtill to maintain him in the form of his doing; yet that it exceed not mediocrity or temperature, but remain light on the head with a ſweet mouth.

Thus having ſhewed the Rider, that it muſt be done by keeping this order, I proceed: Let him ſtay his Horſe temperately with an even hand, as his reſiſtance ſhall require, without giving any other liberty, then with his Rod to ſtrike him gently upon the bowing of his Neck, provoking him mildly with the Spur on that ſide on which he moſt wryeth his Buttock, to the end that he may go juſt, until he draw back one of his fore-feet, which if he do, make much of him, and then ſtay a while, and do the like, drawing away the Bridle; for the former cheriſhing will make him to underſtand, and then will he go lightly back with both the fore-legs, when he is touched on the Neck with the Rod, ſaying with a loud Voice, Back: at which Voice, with the feeling of the Rod, and drawing of the Bridle, he will go back to the Riders deſire; and always after when he is out of the due and true way upon the Bridle, let him do the like, that is, to

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go back in form aforeſaid. And although ſome diſorder be committed, let not the Rider deſpair; for he ſhall find him eaſily worn to a good mouth, by this uſe of a temperate and a firm hand, which is the mediocrity of ſlacking and drawing, which is properly named a ſweet Stay, which the Italians call *Dolce Appoggio*, making him light upon the hand, champing the Bit with great pleaſure, and a ſtaid head in due place, the true tokens whereof are juſt Rains: ſtaid, and a light Come-head with pleaſure on the Bit, being properties inſeparable in every perfect ſhaped Horſes actions: But becauſe it may ſeem very difficult to have a continuance of perfection in any action, although it is common upon ſtop, or ſtanding ſtill, to be in order; yet perhaps upon motion he will leave playing upon the Bit, and bear up the head, eſpecially upon the main Carriere, which proceeds from a want of true knowledge, how to maintain and continue the hand juſt and firm with a ſweet ſtay, ſo that he may take pleaſure on the Bit; and therefore how to maintain a Horſe both in furious and quiet doings, is to be conſidered of. If then that at any time he make any diſorder, note it diligently, then ſtay him, and make him go backward, as you did before; for in going back, he will bring himſelf to his right order again, then preſently make much of him, and

ſuch with move him forwards; ſo muſt he be uſed in treading of the Ring, firſt gently upon the Pace, upon the Trot, and upon the Gallop, in practiſing whereof, he muſt preciſely obſerve that it be done with a temperate, ſtaid, and ſure hand, otherwiſe he will gape, thruſt his Tongue upon his Bit, or over the Bit, to defend himſelf, thruſt his head out ſuddenly, pluck in diſdainfully, or elſe ſhaking or moving of his head one way or other, to be freed from the preſſing of the intemperate hand, which is to him violence, and contrary to Nature, the which Art ſhould evermore labour to pleaſe. The true form and practice of drawing the Bridle, is alſo to be learned, which is, that being mounted in the Saddle, let the Rains be drawn equal; and if the Horſe know not the Bit, then let the Bit be very ſlack, and let the Rider hold the Rains in his left hand, with the little finger and Ring finger between, under the Pommel of the Saddle, as near the Withers as he can ſcarcely perceive, the which he muſt not remove until he feel the Horſe to ſtay upon the Bit, and there hold him without ſtaying or further drawing, until he perceive whether the head ſtand in the true form; which if it be not, then let him a little yield his left hand again, and ſtanding ſo a pretty while, bring his left hand to his former place again, where the Horſe made his firſt ſtay upon

on the Bit; then let him draw his Rains with his right hand ſomewhat more through the left hand, as before, but ſo little and gently, as ſcarcely to be perceived; for ſo muſt all the motions of the hand be, and then keep it ſtaid and firm a pretty while; and if he yield, though very little, let him keep his hand ſtill at one ſtay, neither ſlackning nor drawing it, whereby he will feel the eaſe that he hath got by yielding of it, and then preſently make much of him. But if it ſo happen that the Rains fall ſlack, let him not remove his left hand, as before; for they muſt not be ſlack until they ſtay again upon his right hand, whereunto whenſoever he yieldeth, make much of him, continuing ſtill in this ſame manner to ſollicite him, till his head be in its due place: after which time, if he bear not light, let his Rider ſtrike him gently upon his Knees of his fore-legs, to make him to go back, whereby he will bring in his head, and then will the Bit move, and his hand find eaſe; but let him be very careful at that inſtant, to keep his hand ſo firm, as that he neither ſlack nor draw in, to the end that he may feel and retain the eaſe of his own motion of yielding, which willingly he will not loſe, it being delightful to his Nature, but take ſome pleaſure to ſtir the Bit in his Mouth, and go backward withal with it, which when the Rider finds out being

won, with obſervation of good order, he may be brought to a more continual perfection. Thus I have ſhewed the Rider ſo much of the Art as may help him: but if the Nature of the Horſe be oppoſite and repugnant, as in the greateſt number of Horſes, it is, as I have ſaid before, to no purpoſe; however for a time he may ſeem to be taught, yet queſtionleſs it cannot be of any continuance.

1. Therefore let the Rider obſerve, that when he is teaching of his Horſe herein, or any other Leſſon, that he do not trouble him with any other thing at that time.

2. That he do not ſuffer any one to ride him, until he be perfected by himſelf in ſuch Leſſons as he taught him, leſt he ſhould be confuſed by the diverſity of Teachers, and their manner of teaching.

3. That when he is brought to a juſt ſtay of head, and an aſſurance of the Bit, that then his Rider is to maintain him therein to a fulneſs of perfection.

4. When he is out of order, then let him ſtay him, and make him go back, as before was mentioned.

5. When he is in order, as we have often expreſſed, make much of him, and not ſtay long, but with a firm hand gently put him into his pace again.

6. If he continue in good order, cheriſh him,

him, guiding his body with a pleaſant and gentle motion of the Calves of your Legs, move him to do it more expeditiouſly, which if he be of a good Nature, he will ſpeedily perform; always remembring to keep a firm hand, unleſs he bring in his head.

7. If his Trot continue not lightly upon your hand, ſtay him, and cauſe him to go back, which will bring him in order again, and then gently put him into his pace, and ſo to his Trot, as before; which being well done, cheriſh and delight him with all the ſweetneſs that you may, ſo that the Rider may overcome in his love thereby, and guide him by ſome leading Line, and give him a little Graſs or Hay out of your hand, tickle, ſcratch him, and ſpeak to him moſt loving words, which will make him at his next Exerciſe to do all to his Riders greateſt content, and within twenty days or thereabouts, he will pace and trot in ſuch order, as that the Rider may always afterwards trot him moſt ſwiftly in the Ring or in the Manage.

8. In his ſwift Trot, by all means keep your true ſeat and firm hand, ſo that he loſe not that excellent grace and form preſcribed; but do not gallop him, till he be juſt perfect in his ſwift Trot, and then out of that Trot, to put him to a ſwifter and quick Gallop in the large Rings, even to the ſtop: but beware that

that you draw not your hand haſtily to you but by a little ſway of your body, back & hand together, and ſway your hand there, until he retreat a ſtep or two, and there ſtay him, and ſuffer him not to go forwards,& at that inſtant make very much of him, and ſo let your hand and body re-aſſume the ſame place again.

9. I dare to aſſure the Rider of the right uſe of what hath been ſaid, and of the ſucceſs thereof. Therefore let him follow his Practice, and continue it: Let him pace his Horſe overthwart ſome deep fallow, as faſt as he can for half an hour, but ſuffer him not to trot, keep his hand in a firm and temperate ſtay, as before; and if he find his head in due place, his carriage light and pleaſant upon the Bit, he may aſſure himſelf that he hath gained the perfection of the hand, and the true uſe thereof for the teaching and making of his young Horſe; wherein obſerve, that if he be of the perfect ſhape, his head will be in the due place, and light upon the Bit without Art.

I now intend to diſcourſe a little of the Horſe that is already taught, and brought to perfection: with him the expert Rider hath ſmall uſe of a Rod, or any other help, but to keep his true, juſt, and perfect ſeat, becauſe his Horſe, by the leaſt token of Bridle or Spur, will do all things in ſuch time and meaſure, as the Beholders will judge the Man and Horſe to be but one body, one mind, one will; and there-

therefore how the Rains ſhould be carried, placed, and uſed, is the only thing to be ſpoken of.

The Rains he muſt hold in his left hand, placing the little finger and the Ring-finger betwixt the two Rains, and the Thumb cloſe upon the Rains, ſo as that the hand remove not from the Creſt of the Horſe; for by the motion of the hand, it is ſignified to the Horſe which way you would have him turn, and ſlacking it on the other: the order and manner whereof hath been, and is yet diverſly uſed of the beſt Horſemen, and therefore I leave it to every mans uſe, as he findeth it to be moſt fit: But in the running of the Tilt, where the Horſe neither doth nor can turn, the Rider muſt not draw the Bridle towards the Tilt, but only ſtrain the Rain that is next the Tilt, to make him carry his head towards the ſame.

1. Becauſe the true ſhape and goodneſs of the Nature of the Horſe is it that Art attendeth and worketh upon; in thoſe Horſes the Rules of Art have perfection with continuance, ſo as that the Horſe that is of perfect ſhape of body, ſhall not indanger wind, or limb, or deformity of body.

2. Next his perſon ſhall never be in peril by rearing or running away.

3. Nor ſhall the Rider ever be grieved with heavy bearing upon his head, but perform

form all with great delight: neither ſhall he need Canetſale, Muſrole, Martingale, or ſuch like, but only falſe Rains.

4. And laſtly, this teaching will manifeſt the difference betwixt the true knowing and ignorant Riders, which will be perceived by the very Horſes doings; the Horſe doth repreſent and expreſs himſelf moſt beautiful, and thereby renders the expert Rider and the Horſe to appear moſt nobly, with ſuch delight to the Beholders, that they will ſeem to be raviſhed with it: all which is attained by diſcretion, taking of time with moderation and temperance, which is little regarded, and of very few, who will rather chuſe to ride out of order, and that with ſuch extremity of Spur and Rod, that for want of breath they commit many ſtrange diſorders, whereby the poor Horſe is moſt cruelly tormented, having no other to ride him but one without diſcretion, a mad man. After your Horſe hath perfectly learned ſwiftly to trot, and to ſtop, as well to go back, then ought he to be taught rightly to advance, which is by lifting up his forefeet juſt and even together, like to a Goat, ſomewhat above the ground, and ſo to let them fall even and juſt, twice or thrice together: the true doing whereof ſtill cauſes him to make a juſt and perfect manage, and a ready and true turn: For the attaining whereof, trot him

him gently forty or fifty foot in ſome plain way, then give him a juſt ſtop, which he will truly perform, becauſe hath perfectly learned the ſame. Let him always keep a perfect, ſteddy, and pleaſant hand on the Bridle, then inſtantly with a mild voice ſay, Hup, Hup, ſtriking him at that inſtant with his Wand on the right ſhoulder, and alſo on both the Calves of his Legs together, but ſpur him not, if poſſibly without it he will advance, the which with a little labour and patient teaching, no doubt but he will attempt to do twice or thrice together, which if he do, then in that inſtant let his Rider make much of him (although he did it very meanly) then let him pauſe a little time, and give him breath, and trot him again in the ſame manner the like diſtance of ground, and as before, ſo gently uſe him again: but if he do not better every time he is taught, he muſt be ſtill ſollicited, until that he do better; and then after that he can in plain ground perfectly advance, then teach him gently upon the hanging knole of a Hill, to bring him perfectly to ſtop, and run ſliding upon his Buttocks or hinder Legs, which is very handſom, beautiful, and graceful for Manage and Turn; and therefore let him do it before he is taught any other Leſſon, and then he will do it upon a ſoft Trot, upon the ſwift Trot, and afterwards upon a ſoft Gallop, and not before; but never

never upon a ſwift Gallop, until that he be perfect both in Turn and Manage. If he advance too high, and not juſt and even, with a good grace as he ought, then may the fault be ſpeedily found, and eaſily amended by immediate correcting him with one even ſtroke over his Legs, the Wand again ordered and conveyed out of his ſight, with a ſweet ſtaid hand on the Bridle: few ſuch tryals will amend and perfect what is amiſs in the Horſe.

And whereas ſome appoint many helps for Horſes that are harder to turn on the one ſide then on the other (although I do confeſs their general deſire is more apt to the left hand then to the right) yet to a Horſe of good Nature and perfect ſhape, a little Art will ſpeedily teach him to teach others: but if he be a Jade, one may as ſoon teach an Aſs to play upon a Harp.

It now remaineth to ſhew, when to make the half Turn and the double, the Chambetta, the Manage, to paſs a ſwift Carriere, the Cornet, and ſuch like.

The next Leſſon for him to learn, after he is perfect in thoſe I have ſet down, as I promiſed, is to make a true and a juſt half double Turn, which ſhould be in this manner. Firſt, when the Rider hath gently trotted, ſtopped, and advanced his Horſe the length of a ſhort Carriere,

riere, let him teach him gently and mildly to make the half Turn (beginning always on the right hand) that is, for the Rider to turn him with the help of his left Leg, that his head may ſtand that way, which before his Tayl ſtood, which is called a Half Turn, becauſe he maketh his half Circle: but if in the Turn he ſet his head that way it ſtood at the firſt, that is a whole Circle, and therefore called a Whole Turn: But let him firſt do the half Turn perfect, which muſt be done by helping him with his Voice, and Calf of his Leg, and not at firſt by any means to have him ſpurred, if he can otherwiſe be brought unto it; becauſe a Spur is a correction, which is not to be uſed but at that inſtant time when he hath committed an errour, and not when he remaineth ignorant in what he do; by which means undoubtedly, being a ſenſible Creature, he will perceive his errours and offences, whereby with little correction he will eaſily amend any fault. Let the Rider never go about to make him deſpair, but continually incourage him; for having formerly attained a perfection of a juſt, even, and ſwift Trot in the Rings (the very true ground of all other Leſſons) he will eaſily turn on the right hand, ſetting his head that way that his Tayl ſtood; the which being perfectly attained, then let the Rider cloſe it up with another half Turn on the ſame hand,

hand, with the preſcribed help, ſetting his head and all his body in the ſame way it was at the firſt; then give him breath, and make much of him, then make him do as much on the left hand, with thoſe other preſcribed helps, and ſo change from hand to hand, leaving always on the right.

1. In the doing whereof, obſerve whether he bring on the contrary Leg orderly.

2. That he do it after the firſt bound of advancing, and after the ſecond or third bound.

3. That after he is perfect in doing the whole Turn, that the Rider make him to do it ſwiftly and roundly, without ſtop or ſtay of the half Turn, and ſpeedily in the cloſing of every whole Turn, and in as narrow a compaſs as may be.

4. That the Rider (as hath been ſaid) begin on the right hand, and end on the right.

5. After he is perfect, as aforeſaid, give him on each hand three whole Turns, whereof let the firſt be very fair and ſoftly, beginning at the right hand, and ending on the right; in performing whereof, the Rider muſt always help him with his Tongue, his Rod, and his Leg, by which continual uſe, before he teacheth him any other Leſſon (which ſhould never be done, unleſs he be perfect in the Leſſon he is learning, ſo that the Rider ſhall in

the

the end, with discreet and temperate teaching, bring him to an admirable perfection, keeping time and measure, that the one be not swifter then the other; if either, the last, which for the most part is as speedy and perfect.

Now to proceed to the Managing thereof, the true signification whereof is to be rightly understood by such as intend to be expert in Horsemanship; for *ignoratis terminis ignoratur & Ars*, to be ignorant of Terms is to be ignorant of the Art: I take it to be a compound word of the word *Manus* and *Ago* (the hand in this Art being the Instrument of Instruments) doth guide and govern the Horse to every action, and therefore may fitly be said, *Manu agere*, or as the Italians properly call it *Manegiare*, which is as much as skilfully to handle. And therefore when the Rider shall exercise the Horse perfectly and gracefully in his place, trot, stop, advance, double, or single turn, gallop, leap, capriole, corvet, assault, or whatsoever the hand being the principal *Actor* or *primus motor*, may truly and aptly be called Manage; which cannot so rightly be done without the general knowledge of the practice of the Precepts of the whole Art.

And although many worthy Horsemen have and do only rest and rein Managing to Galloping, and to bring a Horse to and fro one self same path, by a half rest, whole rest, and when

the Rider manageth with a half reſt, cauſing the Horſe at the end of every managing path, after he hath ſtopt, to advance twice together, and at the ſecond bound to turn and reſt one bound: doth not the Rider therein exerciſe the Trot, the Stop, and the Advance, and the Turn which he formerly learned, and according to the ſame manner? or when he manageth with the whole reſt, by turning him immediately upon the ſtop, without any carryance or reſt at all, which only is moſt common with us in *England*; and yet the managing of the half reſt is moſt neceſſary for the attaining of perfection: doth not the Rider keep and maintain the Horſe in one path, one place of ſtop, making him to keep his ground, and therein carry his Head, his Neck, his Legs, and his Body juſt, cloſing his Turn roundly, and in a narrow room, with the true time and meaſure in every action, as hath been taught? How then can Managing be properly referred to one only action, when it is the perfect acting of every Action and Leſſon he hath learned? wherein when the Riders Horſe is moſt ready and perfect, he may increaſe the often doing of his Leſſons as he will, and make an alteration of his Turns and Exerciſes, to find out the truth of his obedience; and when the ſame are firſt artificially and then exactly performed, then may the Rider be truly ſaid to be a perfect Manager.

Now

Now are to be ſhewed, what are the principal things that are to be obſerved in the true Managing of a Horſe.

He is taught his Manage with a ſoft Trot, and not with a Gallop: my reaſon is, becauſe thereby he may be at the firſt ſenſible of apprehenſion what to do, and how to do, and that gracefully, by the bowing of his Houghs behind, by turning round with the Chambetta, which is by holding up the fore-foot on the ſide he ſhould turn, whilſt he brings over the contrary Leg, and ſetteth it not down until he have cloſed his Turn, ſo as hereby he ſhall carry both his fore-feet above the ground, not trailing upon the ground, which is diſgraceful. When the Rider teacheth his Horſe (which is after he can ſtop well) let him advance before, and turn readily on both hands, then with a ſoft Trot come to the place of ſtop about 20 paces in length, and make him advance twice together, and at the ſecond bound turn him on the right hand, as hath been ſaid, you muſt always begin, helping him, ſo that by bowing of his Houghs behind, he move his forepart orderly, then immediately in a gentle manner trot him back to the place you came from, and then there after he hath made his ſtop, at the ſecond bound of his advancing turn on the left hand, obſerving the like order, until the Rider have gone ten or twelve times, and at laſt

cauſe him to advance twice together. And thus much for the half reſt, which is to advance thrice, and at the third bound to turn; but be ſure he be perfect in one Leſſon before you teach him another.

In all the Riders managings, let his body ſtill accompany his Horſe with a good grace; and when he hath very perfectly learned his Manage on the ſoft Trot, he may manage him with a Gallop, giving him on each hand one ſingle Turn; and a little before he is turned, let the Rider hold his Wand on the contrary ſide, whereby he ſhall know on what ſide to turn; and at the ſtop, let the Rider make him to advance, either with his Voice, Rod, or Spur, always being careful to give him breath, evermore beginning with a gentle Gallop, until that he be perfect. But I wiſh the Rider ſo to uſe and exerciſe his Horſe, that he may be long Maſter of ſo good and ſo perfect a Horſe, and not to ſpend or ſpoil him in a little time, in teaching him needleſs toys, as ſome ignorant Horſemen uſe to do.

After the Horſe is perfect in ſuch Leſſons as have been formerly taught, and is grown to full and perfect ſtrength, then let the Rider begin with him with a ſhort Carriere in a fair ſandy way, and with a lively Voice put him forward, forcing him to run ſwiftly, roundly, and ſmoothly, with a ſteddy hand,

and

and lightly to ſtop himſelf on his Buttocks; then let him turn him on the left hand, and ſoftly pace him to the other end of the Carriere path, and there ſtop him, and turn him again to the right hand, and ſo leave off, and reſt him. And as this paſſing Carriere or ſwift Gallop muſt never be done or taught, until the Horſe be, as hath been ſaid, moſt perfect in all the Leſſons; ſo muſt it be done very ſparingly and ſeldom, as once in a month at the moſt.

CHAP. V.

Of the Bound, Leap, Yark.

SOme have a deſire to have their Horſes to bound, leap, and yark: and though I know it might be moſt exactly done by the beſt ſpirited Horſes; but tending altogether to their deſtruction, and a matter rather of fooliſh delight then of any uſe, I leave it to the diſpoſition of the Owner, wiſhing much rather to have ſuch dangerous Exerciſes omitted then practiſed, unleſs that there are more plenty of Horſes that are fit for the ſame; therefore any Reader cannot admire that he meets with ſo ſhort a Chapter.

CHAP. VI.

Of the Capriole and Cornetti.

THe difference betwixt theſe two is, that the Capriole or Goats-leap is always in going forwards, and the Cornetti ſtill in one place. Theſe are to be learned & taught by one order, but neither of them wil be well learned, & therefore never exactly done, unleſs the Horſe be very perfect to ſtop, which muſt be by much bending of the Elbow of the hinder Houghs, or Heels of the Horſe. Now the Cornetti may in ſome ſort reſemble the dancing of a Bear at a ſtake; for when he danceth and pranceth up and down in one place, lifting his fore-feet even and juſt together, ſeeming to turn, if he might be ſuffered; which is never well done, unleſs the Horſe be juſt and ſteddy of head, and body, bowing the Hams of his hinder Legs, as if he would ſit or ſlide on his Buttocks. And the Capriole is in the ſame manner, but ſtill going forwards, ſeeming as though he would yark behind by advancing his Rump, but doth not; and as he doth it forwards, ſo will he do it backward and ſidelong.

Now the Rider need not to teach his Horſe either of theſe, until, as hath been ſaid, he be perfect-

perfectly exerciſed in thoſe Leſſons formerly mentioned, becauſe theſe Leſſons are only learned by ſtopping and advancing; the which, if he have once perfectly, and have long practiſed, then trot him ſundry days upon ſome hanging ground, and upon the Knole of the Hill on the ſame ground, make him to advance twice together at the end of the two paces, all the length of the Hill downwards, ſtill remembring to cheriſh him when he doth well, to give him breath, that all his performances may be done with delight. And if he be helped with the word ſaying, Hup, and by the Riders Rod, by ſtriking him on the fore-part of the ſhoulder, he will go from ſtop to ſtop, advancing both the fore-feet and hinder Loyns, with time and meaſure, as often as the Rider pleaſes, and in ſuch a juſt, even, and ſtaid manner, as will be very pleaſant to the Beholders.

Now becauſe I would not have the young Rider to begin any Leſſon, but by the direction of a perfect Maſter, and in that courſe to continue; ſo muſt the young Rider endeavour with himſelf to know the reaſon of all his Practices, and therefore muſt be ſure to be preſent at the Exerciſes of the moſt skilful Horſemen; & as *Solomon* ſaith, let his foot tread often upon their threſhold. Let him be acquainted with the moſt expert Practitioners, and when he is

able rightly to judge and to make a true difference betwixt good and bad; then let him practise as often as he can, and never doubt with good advice to become a perfect Horseman, so as to be able to teach whatsoever is fit for a Horse to do, and a young Gentleman to know.

CHAP. VII.

Short infallible Rules to be observed and practised by every Horseman.

1. DO not gallop your Horse before that he can stop well.

2. Do not run him before he can stop in his Gallop.

3. Do not swiftly gallop him before that he can stop.

4. Do not make him a Runner before he be six or seven years old.

5. In all his doings, from the beginning to the end, keep his Rains true, and his head steddy; for this Rule is the foundation of all other Rules.

6. In the morning early, when that he is empty, before he eat any thing, teach and exercise him until he be perfect; and after, twice or thrice in a week is sufficient.

7. In all his teaching and exercise, do them mode-

moderately and temperately, and leave him always after the well doings of his Leſſons, both in breath, and with a good mouth.

8. After he is perfect in his Leſſons, let the Rider exerciſe him not always in one place, neither let him confine him to a juſt and certain inſtant of time.

9. In the managing of his Horſe, let him not gallop him ſwiftly at the firſt, but with a ſoft Pace, and ſeldom with a Gallop.

10. In correcting of his Horſe for an errour, let him correct him even in that inſtant of time when he erred, and not otherwiſe; and when he had done well (as hath been often ſaid) let him be ſure to make much of him, and cheriſh him.

Theſe following Rules muſt be obſerved afterwards, when he is ready in all his Leſſons, and in the greateſt perfection of all his ſtrength; for before that time they do not much concern him.

1. *Diſtemper gather roundly.*
2. *Go on ſmoothly.*
3. *Bear his Head ſteddily.*

1. *Diſtemper Hand and Mouth.*
2. *Diminiſh not his Strength.*
3. *Elſe it will make him over-reach.*

In

In all his Teaching and Exercise to observe,

1. *Begin softly.*
2. *To go afterwards on more speedily.*
3. *To perform couragiously.*

Lastly, let the Rider exercise and perform all his Actions and Motions with an upright Body, his Stirrups being short; let him keep his Legs and his Seat gracefully, in a comely and beautiful manner, and let him perform all he hath to do couragiously, without the least perturbation of Mind.

A true

A true and brief way of Planting and Ordering of all ſorts of Orchards, either Apple, Pear, Plum, or Cherry, according to the Experience of the Author; being never before Publiſhed.

THe principal occaſion that moved me to write this ſmall Treatiſe concerning Orchards, was, becauſe very many of my Country-men are ſo moſt abominably cheated and abuſed by buying ſeveral ſorts of Trees of our Nurſery-men, which having bought, are ſo much deceived in their expectation, of raiſing an Orchard to ſome conſiderable growth and benefit in a ſhort time, by buying Trees of the ſaid Nurſery-men, which hath proved ſo prejudicial to the Nation, that thouſands might have enjoyed the benefit of their labours in Planting of Orchards, had they not been deceived in their Trees, beſides the great charge and uncertainty of their growing. Now I ſhall briefly ſhew you how all ſorts of people are abuſed in buying Apple, Pear, and Cherry-Trees (but as for all ſorts of Peaches, Nectellings, Apricocks, and

all

all ſorts of ſuch kinds of Fruit, they can bring them up far better then any other, they having both, and giving them extraordinary attendance, ſo it is not convenient to ſhew the way of raiſing of them) which is thus: A Gentleman or Country-man, Farmer, or any other having provided his Piece of Ground, by manuring and enriching it with good ſtore of Soil (for I ſuppoſe no body is ſo ignorant to plant without his Ground be well enriched) his next thing (as hundreds before him have done) is to inquire out a good Nurſery, which no queſtion but he may find very good, but he will find it bad enough before he hath done with it, or elſe he will ſpeed better then his Neighbours or the Author of this hath done before him, who having provided his Catalogue of ſeveral ſorts of Trees, comes to the Nurſery-man, and deſires to let him ſee ſuch and ſuch Trees as are written in his Catalogue, which the Nurſery-man willingly performs. The Gentleman having viewed, marks them, and likes them exceedingly, agrees for 300 or 400, according as his Piece of Ground will take up; and are, queſtionleſs, very good Trees, ſtraight, handſom, and beautiful to the Beholder: but when he comes to take them up, they ſtand ſo exceſſive cloſe, that two thirds of the Roots are ſpoiled, and the Trees being in extraordinary proof, that by ſuch

time

time they come into the Country, the Trees are ſo withered and bruiſed, that not one in ten comes to perfection: And further, the Trees that you buy of theſe Nurſery-men come out of ſuch a very rich Soil, that when they come to be planted in the Country-mans Orchard, pine away to nothing; and after ſix years ſtanding, have been forced to plant them afreſh, to his loſs of time, great charges, coſt, and trouble. But ſtill they run on, and delight to be deceived, and are of this opinion, that thoſe Trees out of the Nurſery, being four or five years grafted, will turn to an Orchard far ſooner then any other way of Planting. But I ſhall ſhew you the true way of Planting and Ordering your Orchards, whether Pear, Plum, Cherry, or Apple-Orchards, with little or no charge, and yet ſhall be an Orchard much ſooner and better, and not come to the twentieth part which will accrue by buying the Trees out of the Nurſery, as the Author hath proved by Experience.

In the firſt place you muſt ſeek out, if you can poſſible with convenience, ſuch a Piece of Ground that leanes towards the South, or being a Hill riſing towards the South, that the Sun may caſt his beams to the root of every Tree through the whole Orchard, which if it be upon an exact Level it cannot. Let the Ground be good by Nature, if you can; if

not,

not, you must enrich it by soiling it, which will be no loss, considering the several Crops it will bear after it is planted. Now having found out a place fitting for the purpose, cast up a high Ditch, and well quick-set it, that so it may grow up with your Trees, to defend them as they grow up, if not quick-setted before. Now having found out your Ground, and well fenced it, you must consider what kind of Ground it is, whether black Mould, Clay, Gravel, sandy or mamie Ground: according to the Nature of the Ground, you must get such Fruits as may prosper therein accordingly to the several Soils; which five sorts many times happen in an Acre of Ground. I shall begin with the Clay-ground; all sorts of Winter-Apples do abundantly delight in a Clay-Ground, being very well soiled and made rich: and I have observed, that your Winter-Apples, as Pepins, Pearmains, Gilliflowers, Cunnings, and Harvey-Apples, which if you have them of the best bearing sort growing upon a Clay-Ground well chalked, have been larger, firmer, and have endured two or three months longer then that same sort of Apples growing upon a Gravel or sandy Ground. Your next Ground is your mamie or chalky Ground, which brings forth a very lovely sweet Apple, but not so big as the other, yet far sweeter, and will keep full as long,

long, being fit for all ſorts of Winter-Apples, and Summer-Pears, and Winter-Pears. Your next Ground is your ſandy Ground, which is only fitting for Summer-fruit and Cherries, which to make them thrive, you muſt well chalk and dung, at leaſt a yard round from the bodies of the Trees, and a foot deeper then the Tree ſtands. Thoſe Apples that love ſuch a kind of Ground, are your Lerding, French Pepin, Higthnig, Robbers, and all other Summer-Apples and Pears, and your Duke-Cherries, and ſeveral others which will not laſt beyond *Chriſtmas*, yet are true bearers and excellent. Your next is your gravelly Ground, which will bear excellent Fruit, being well ordered, until the Trees have taken good root. You muſt dig the Ground above a yard round from the body of the Tree, and dung it very well, that ſo the Tree may gain good ſtrength, and bigneſs of root before it come to touch the Gravel, that ſo meeting with the Gravel, it may not ſtand at a ſtay, when it comes to root in the Gravel, and then there is no doubt, but it will anſwer your expectation. Your next ſort is your black Mould, which is the beſt, and will bear all ſorts of Apples, Pears, Plums, and Cherries, with little help; I do not mean your black ſort of heathy Mould, which hath neither heart nor goodneſs, but to be cut up in Summer,

mer, and well dryed, will make good fires in Winter. Now having found out your Piece of Ground, and ordered according to directions, measure your Ground, and ſo contrive to ſet the Row of Trees full South, at what diſtance you think moſt convenient, according as you do you intend the Trees ſhall be ſuffered to grow in bigneſs, after your firſt Row is planted, which muſt be ſet at ſuch a diſtance, that you may plant one between every four Trees, which will make a fifth. Now having made you underſtand the charge, and deceit of your Nurſery-trees, how they pine away coming out of ſo warm a place, and ſo rich a Soil, into ſuch a barren place, for make your Orchard as rich as you can, it is barren Ground to your Nurſeries; for otherwiſe how could a man maintain his Wife and Children out of two or three Acres of Ground, if it were not extraordinary good? Therefore when your Ground is provided, and made fit, imploy your Labourers or Servants to gather you ſo many dozens of Crab-ſtocks, Pear-ſtocks, or Cherry-ſtocks, about three foot long, or thereabouts, according as it beſt pleaſes the Planter to have them out. See your Crab-ſtock and the reſt be in good proof, and not old decayed ſtock, but green, and as clear without knots as you can; let them not exceed in bigneſs above three inches about. Now having conſidered

your

your Piece of Ground, what ſort of Land it is, ſet it according to directions; having ſo done, buſh up every Tree, and lay ſome muckle Dung to every one about half a yard round, do not cover your Tree too deep in Mould, three inches above the Root is enough; for if you cover them too deep, a good ſhower of Rain will not reach the Root. This muckle Dung keeps the Roots moiſt and warm, and kills all manner of Weeds that would grow about the body of the Tree. After they have ſtood one year open the Buſhes, and prune all the Shoots off that ſtand a foot below the top, leave not above three or four at moſt, and then you may put in Sheep, Calves, or Beaſts: But if it be well manured, you may plant Garden-Beans or Peaſe, according as you find the Ground inclined. If your Orchard lye ſloping, as is beſt, then make a Trench to lead to every Tree; you need not have many great Trenches, but two or three, and the reſt ſmall, and ſo you may water your whole Orchard for the firſt year or two without any trouble. When the Trenches are made, you ought to let your Crab-ſtock Pear or Cherry ſtand three years at the leaſt before you graft, and two before you bud; for you will find they will bring forward your Graff more in one year then in two. You may graff according as you ſee the Stock to proſper: be ſure to

have your Graffs of the beſt ſort of Fruit-Trees, and of good Bearers; for ſome ſorts bear fair Apples, but very few.

When your Trees are graffed according to your mind, of all ſorts of choice fruits, then at the Fall of the Leaf view all your Trees, and ſtop up the cleft where the Graft was, put in ſome Pitch to keep the Rain out, and then it will be cloſed ſoon after, and the Tree grow the firmer. When your Grafts are two years ſhoot at farthest, prune them all, and not ſuffer any to grow croſs one another, eſpecially in the middle of the Tree. If you find ſome to ſhoot up ſtraight upright, hang a little ſtone at the end of the boughs, but one Spring, and you will make them grow how you pleaſe. Thoſe that grow ſtraight upright are ſeldom good Bearers, if they be ſuffered to grow; therefore you may remedy it at the firſt: But when they are grown too old, they will not be half ſo plyable. When they begin to bear, do not ſuffer them to bear above three or four Apples or Pears, but pull them off; for if you ſuffer them to bear too much at firſt, it will put a ſtop to the Trees growth. This I think is direction enough for any reaſonable man to order his affairs.

FINIS.

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